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ABSTRACT

Intended as a resource tool for integrating energy and conservation education into the vocational skills areas, this resource guide consists of listings of instructional and technical materials pertaining to 14 vocational curriculum areas. These areas are agriculture, agriculture/agribusiness, architecture, automotive, business, construction, electrical/electronics, food services, forestry, health, home economics, industrial arts, marketing, and trades and industrial mechanics. Included in each citation are the title, source, date, description, and cost of the given resource. The remainder of the guide consists of lists of the following agencies/materials: Oregon agencies providing materials and assistance; general energy conservation technical materials; general, wind/solar, and environmental bibliographies; resource guides; energy education catalogs; energy periodicals; and Vocational Education Administration resource materials. (MN)

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ED220594

OREGON VOCATIONAL ENERGY EDUCATION PROJECT

A GUIDE FOR VOCATIONAL ENERGY EDUCATION:

Resources

Key People

Classroom Materials

CE 032 965

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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Oregon Vocational Association
Executive Secretary
3821 Mathaney N.E.
Gervis, Oregon 97026

-June 1982-

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First Printing, June 1982

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PREFACE

The Oregon Vocational Association in concert with the Oregon Department of Education, Vocational Division, offers this resource guide to educators. Energy considerations reach all citizens in their work, play and daily living. Vocational teachers in all job clusters need to examine their curriculum and infuse concepts and related skills to meet the needs of people entering the work force.

This resource guide reflects material available in a national search of state and national government, education, industry, business, labor and private research.

It is our hope that Vocational teachers tap the readily available energy resources. We have found that energy skills curriculum is an exciting addition to vocational classes.

Joel Pynch, President
OVA 1981-82

ACKNOWLEDGEMENT

This is the first edition of the OVEEP Resource Guide. During the developmental period from October 1981, to June 1982, several people contributed extensively to its successful completion. They are as follows:

Joel Pynch, Project Director
OVA President, 1981-82

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Oregon Association of Future Homemakers of America

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PURPOSE

Too busy to conduct that search for the most up-to-date instructional and technical materials available to VOCATIONAL EDUCATORS in the area of energy and conservation? Relax, it's been done for you!

Innovative teachers know that energy and conservation concerns are a matter of considerable interest to most everyone, especially students who represent our future workers and consumers.

As such, this extensive Resource Guide provides a useful resource tool for integrating energy and conservation education into the vocational skill areas.

HOW TO USE THIS GUIDE

The OVEEP Resource Guide is arranged alphabetically by vocational skill area. Within each area, the materials are further categorized into two sections—Instructional Materials and Technical Materials. The listings are then arranged alphabetically by the name of the material source (i.e. U.S. Department of Energy).

Listed in separate sections in the OVEEP Guide are Oregon Agency Energy Information Sources, Resource Guides, Bibliographies, Energy-Related Periodicals and Energy Education Catalogs (containing vocational skill related materials). The Table of Contents will refer you to the location of the appropriate section.

PLEASE NOTE: When ordering materials from the enclosed mentioned sources, it would be wise to confirm price since costs change frequently and/or materials are updated.

Oregon Vocational Energy Education Project is available for preview through Linn-Benton Community College library: 6500 SW Pacific Blvd., Albany, OR 97321.

Agriculture

Energy and Conservation Periodicals

Title: ALTERNATIVE SOURCES OF ENERGY
Source: Alternative Sources of Energy, Inc.
Route 2
Milaca, MN 56353
Date: Published Bi-Monthly

Description:
This bimonthly magazine emphasizes the development of alternative technologies for energy production, agriculture, architecture, communication and transportation in a decentralized society.

Cost: $6.00/year

Title: FUEL ALCOHOL U.S.A.
Source: Fuel Alcohol U.S.A.
P.O. 9547
Kansas City, Missouri 64133
Date: Monthly newsletter

Description:
A monthly magazine which discusses every aspect of alcohol fuels including production, sales outlets, government regulations and meetings, with ethanol as an emphasis.

Cost: $16.00

Title: BIOTIMES
Source: The International Biomass Institute
1522 K Street, NW, Suite 600
Washington, DC 20005
Date: Monthly Newsletter

Description:
Energy sources not reliant on fossil fuels is the primary concern of this monthly newsletter. Its primary focus is on scientific econolical farming which optimizes production on a long term.

Cost: $10.00/yr

Title: THE MOTHER EARTH NEWS
Source: The Mother Earth News
P.O. Box 70
Hendersonville, NC 28739
Date: Bimonthly magazine

Description:
This magazine deals mainly with alternative technologies and do-it-yourself projects. There are frequent articles and plans for alcohol skills; automobile modificaitons, wood-gas; passive solar, earth-sheltered, & cordwood construction of both houses and farm buildings; methane digesters; other alternate fuels and construction techniques.

Number of Pages: 188-204
Cost: $18.00/year

Title: SMALL FARM ENERGY PROJECT NEWSLETTER
Source: Small Farm Energy Project Center
for Rural Affairs
P.O. Box 736
Hartington, NE 68739
Author: Demmel, Dennis - Editor

Description:
This newsletter attempts to communicate information generated from the Energy Project which is a research demonstration project implemented to report on a variety of energy-saving innovations, particularly solar devices which have been implemented on small, low-income farms in Cedar Co., Nebraska. Their purpose is to provide information on alternative energy and resource conservation for small farms, demonstrating the potential of improving incomes by saving energy.

Cost: $8.00 - 6 issues

Title: BIOMAS REFINING NEWSLETTER
Source: Solar Energy Research Institute
1536 Cole Boulevard
Golden, CO 80401
Date: Quarterly Newsletter
Author: Douglas, Dr. Larry J.

Description:
A quarterly newsletter which reports on the fermentation activities of the Biomass Energy Systems Branch at the Department of Energy, dealing with current research results and emphasizing the conversion of cellulose to ethanol. Of special interest to researchers.

Cost: Free

Agriculture-Agribusiness
Instructional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: Campbell, E.A., et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Title: THEME: ENERGY EDUCATION
Source: Agricultural Education Magazine
Vol. 53, No. 11, Pages 4-13 May 1981
Date: 1981
Author: Kirkland, Joe R. & others

Description:
This series of articles focuses on energy education as a part of secondary vocational agriculture. Topics addresses include alternative energy sources for agriculture, wood power technology, energy efficiency and energy in the Future Farmers of America program.

Cost: Contact Source

Title: ALCOHOL FUELS - INSTRUCTIONAL MATERIALS
Source: Arkansas State Department of Education
Division of Vocational, Technical and Adult Education
Little Rock, Arkansas
Date: 1980
Author: Jordan, Kenneth; Thessing, Dan

Description:
This document is one of five learning packets on alternative energy developed as part of the descriptive curriculum research project in Arkansas. The overall objectives of the learning packets are to improve the level of instruction in the alternative energies by vocational exploration teachers, and to facilitate the integration of new content on energy into existing vocational programs. Each learning packet contains unit objectives, information, transparency masters, lecture outline, suggested activities, student assignment sheets, tests, and answers to the tests. This unit on alcohol fuels covers the following topics: introduction to alcohol fuels; process for making ethanol alcohol for fuel; and modifying an automobile engine to use ethanol. A glossary is also provided.

Cost: Contact Source

Title: **AGRICULTURAL STRUCTURES VOLUME II**
Source: Instructional Materials Laboratory
10 Industrial Education II Building
University of Missouri-Columbia
Columbia, MO 65211
Date: 1982

Description:
A instructor's guide for teaching Ag structures. Includes working with concrete, electrical work on the farm, plumbing on the farm and alternate energy systems - present and future alternatives, basic solar priciples, passive solar concepts, active solar systems, and other sources, as well as methane gas production. Write for a free catalog.

Cost: $20

Title: **LOW ENERGY TECHNOLOGY - A UNIT OF INSTRUCTION IN GENERAL ENERGY CONCEPTS**
Source: Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Miller, Donna; Becker, William J.

Description:
This instructional package includes lessons on sources of energy, conversions of energy, advantages and disadvantages of sources of energy, energy consumption and energy problems and conflicts.

Number of Pages: 23
Cost: Free

Title: **ENERGY AWARENESS CURRICULUM, 1980**
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This curriculum guide contains course content for a series of "mini-courses" that can be presented in an adult continuing education program in area technical-vocational schools and community colleges. The program consists of nine modules, each divided into units and including learning objectives and student handouts. The modules cover the following areas: (1) Awarness of the energy dilemma—an introduction and prerequisite for the other courses; (2) Surveying energy usage—a brief assessment of the energy used in the United States by the various energy-user categories; (3) Utility bills and economics of energy conservation—a discussion of energy pricing, the development of power utility rate structure, and natural gas rate fluctuations; (4) how to search for energy conservation opportunities—a presentation of opportunities for the individual and the community to save and to conserve energy in the automobile, the home, and the use of appliances; (5) Lighting conservation opportunities—lighting for energy conservation; (6) Hot water heating conservation opportunities—techniques for selecting, installing, and operating the domestic hot water heater; (7) Appliance energy conservation opportunities—techniques for purchasing, operating, and maintaining appliances; (8) Building construction versus energy consumption—factors involved in building an energy-efficient home; and (9) Heating, ventilating, and air conditioning conservation—principles of heating and cooling buildings. Lists of printed and audiovisual resources are included.

Cost: Contact Source

Title: **LEARNING GUIDE FOR ALCOHOL FUEL PRODUCTION**
Source: National Alcohol Fuel Producers Association
1760 Reston Ave., Suite 102
Reston, VA 22090
Date: 1979
Author: National Alcohol Fuel Producers Association

Description:
This is a textbook and working manual for an alcohol production course dealing with a variety of subjects ranging from historical notes on brewing to markets for alcohol. Some chapters include: financing an alcohol fuel production system, regulatory requirements, feedstocks for alcohol fuel, building a plant, fermentation, distillation, etc. Also included is a list of manufacturers, and a bibliography.

Number of Pages: 370
Cost: $20 without binder

Title: **SOLAR ENERGY APPLICATIONS FOR AGRICULTURE. A CURRICULUM GUIDE**
Source: Nebraska State Board for Vocational Education
Lincoln, Nebraska
Date: 1980

Description:
This curriculum guide contains five units for a course in solar energy applications for vocational agriculture. Each unit is organized in a format containing some or all of the following materials: unit objective, specific objectives, suggested instructor and student activities, list of instructional materials, assignment sheets, answers to assignement sheets, job sheets, unit test, and answers to test. Topics covered include (1) energy conservation in the home and on the farm, (2) alternative energy sources, (3) solar energy as an energy source and characteristics of solar radiation, (4) storage and distribution of solar energy, and (5) solar collectors.

Cost: Contact Source

Title: **ENERGY CONSERVATION FOR VOCATIONAL STUDENTS**
Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428
Date: Published in 1981
Author: Developed at Navarro College, Corsicana, Texas

Description:
An 11-module curriculum designed to provide practical applications of energy conservation for both secondary and postsecondary vocational programs, and for adult/continuing education. Includes training in identifying, monitoring, managing, and curbing energy usage. Modules can be used as independent units, collectively as a course of study, or as an integral part of a conventional vocational course. Relate well with home economics, agriculture, building trades, electronics, air conditioning and refrigeration, automotive, economics, cooperative education, physics, and biology. The flexible format includes text/lecture for the instructor; laboratory projects for students; charts, graphs, tables, and transparency masters; pre- and posttests; and a vast bibliography.

Number of Pages: 1,275
Cost: $30.00

Title: **WINTERING WITH SOLAR: ONE SCHOOL'S RESPONSE TO SCARCE ENERGY**
Source: Science Teacher
Vol. 45, No. 4, Pages 23-24
April 1978
Date: 1978
Author: Shore, Ron

Description:
This article describes how students evaluated the thermal performance of existing campus structures and made suggestions for improvements in thermal efficiency as a part of a course in energy conservation and domestic solar energy technology. In addition, the students also designed, built and operated a solar greenhouse.

Title: AGRICULTURE, ENERGY AND SOCIETY, 10, 11, 12
Source: U.S. Department of Energy
Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Date: 1978

Description:
This is an instructional unit consisting of 11 activities which focus on the energy component of food production. Examined in the activities are agricultural careers, the energy efficiency of producing different crops, the use of fertilizers in agriculture and alternatives to conventional farming techniques. Included in the student materials are tables and graphs depicting energy consumption in food production, the effect of fertilizers on grain yields and energy efficiency of common crops.

Number of Pages: 100
Cost: Free

Agriculture-Agribusiness

Technical Information

Title: THE SMALL FUEL-ALCOHOL DISTILLERY: GENERAL DESCRIPTION AND ECONOMIC FEASBILITY WORKBOOK
Source: ACR Process Corporation
808 S. Lincoln Avenue, No. 14
Urbana, IL 61801
Date: 1979
Author: Chambers, Robert S.

Description:
This is a review of alcohol production in a systematic way by one of the foremost researchers in the field. Topics included are the economics, technology and marketing aspects of the alcohol fuel enterprise.

Number of Pages: 21
Cost: Free

Title: ENERGY MANAGEMENT PLAN
Source: State of Alabama
Department of Education
State Office Building
Montgomery, AL 36130
Date: 1980
Author: Staff at Dept. of Education

Description:
This document contains the State Department of Education Energy Conservation Plan for conserving energy in their schools. They believe that if these measures are implemented, that energy consumption can be reduced by 20 percent with capital outlay. Most every energy consuming area of a school is addressed. Some areas covered are: Developing an Energy Management Plan for a School System, Conserving Energy, Combustion Tests for Boilers, Heating Equipment, Energy Management for Food Service Personnel, Home Economics, Agribusiness Education, and Energy Conservation in Equipment Management. Many others are addressed. Also included is a bibliography.

Number of Pages: 54
Cost: Free

Title: **MAKIN' IT ON THE FARM**
Source: American Agriculture News
P.O. Box 100
Iredell, Texas 76649
Date: 1979
Author: Nellis, Micki

Description:
A step-by-step guide to the production of ethanol fuel from farm crops. Included in the booklet are success stories, information on regulations, cost figures for stills, contacts for equipment needed, and suggestions for starting out. Fully illustrated with detailed plans.

Number of Pages: 88
Cost: $3.70 Postpaid

Title: **ENERGY, AGRICULTURE AND WASTE MANAGEMENT**
Source: Ann Arbor Science
P.O. Box 1425
Ann Arbor, MI 48106
Date: 1977
Author: Jewell, William

Description:
Large, useful reference source on production of energy from agricultural wastes. A large section is devoted to anaerobic fermentation. This is a detailed study for layperson and civil, agricultural and environmental engineers.

Number of Pages: 540
Cost: $27.50

Title: **ENERGY CONSERVATION FOR AMERICAN AGRICULTURE**
Source: Ballinger Publishing Co.
17 Dunster St.
Cambridge, MA 02138
Date: 1979
Author: Friedrich, Robert A.

Description:
Although agriculture production uses only a small percentage of our annual energy consumption - currently 4% - significant potential exists for saving part of that energy. The author offers policy recommendations for state, county, and city governments to consider - suggesting approaches that can be adopted to local needs - for saving energy in farm machinery operation, irrigation, crop drying, fertilizer and pesticide use, and livestock production.

Number of Pages: 184
Cost: $16.50

Title: **BIO-ENERGY DIRECTORY (ANNUAL)**
Source: Bio-Energy Council
Suite 825 A, 1625 Eye St., N.W.
Washington, DC 20006
Date: 1979*, 1980*, 1981
Editor: Bente, Paul F., Jr.

Description:
These directory volumes contain one-page summaries of 1,850 projects in 63 countries concerned with biomass generated energy. Hundreds of projects deal specifically with alcohol; reports are divided into sections based on technology involved. (Each volume reports only new information).
*Schools requesting special discount on official letterhead stationery may purchase 1979 and 1980 volumes, postpaid for $10.00 each, while supply lasts.

Number of Pages: 534, 766, 1201
Cost: $40.00*, $70.00*, $90.00

Title: **A FISH AND VEGETABLE GROWER FOR ALL SEASONS**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1977
Author: Huke, Robert, and Sherwin, Robert Jr.

Description:
Aquaculture, horticulture or both together are described in this book. Topics discussed are Sheltered Food Production, History of the Greenhouse, Aquaculture for Food, The Dome and Build Your Own. An extensive bibliography is included.

Number of Pages: 125
Cost: $4.95

Title: **BUILDING AND USING OUR SUN-HEATED GREENHOUSE**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1977
Author: Nearing, Helen and Scott

Description:
Good explanations of how to build the greenhouse, how to operate it yearly, and which vegetables and varieties grow best in even the coldest parts of the U.S.

Number of Pages: 148
Cost: $6.95

Title: **PRACTICAL BUILDING OF METHANE POWER PLANTS FOR RURAL ENERGY INDEPENDENCE**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1974
Author: Fry, J. John

Description:
This is a practical book on how to design and build a displacement-type methane-generating plant, complete with charts, diagrams and photographs. Answers most commonly asked questions regarding these systems. Describes the three main types of methane power plants: Batch load, vertical and horizontal and analyzes the economics of methane power plant operation.

Number of Pages: 96
Cost: $12.00

Title: **THE FOOD AND HEAT PRODUCING SOLAR GREENHOUSE**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1980
Author: Yanda, Bill and Fisher, Rick

Description:
Shows you how to design, build, operate or buy a greenhouse that will add solar heat to your home and save energy dollars. Takes you through a planting, maintenance and harvesting procedure that will put fresh vegetables on your table year around. Has photos, diagrams and explanations and examples of greenhouses all over the U.S.

Number of Pages: 208
Cost: $8.00

Title: **FOOD OR FUEL: NEW COMPETITION FOR THE WORLD'S CROPLAND**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1980
Author: Brown, Lester

Description:
Topics include: The Technology and Economics of Energy Crops, National Plans to Produce Energy Crops, The Impact on Food Supplies and Prices, Choosing Food or Fuel.

Number of Pages: 44
Cost: 1-9 copies - $2.00 ea.
10-49 - 1.50 ea.
50 or more - 1.00

Title: **HARNESSING WATER POWER FOR HOME ENERGY**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1978
Author: McGuigan, Dermot

Description:
Chapters on "How to Measure Head and Flow," "Water Wheels," "Pelton Impulse Wheels," "Cross-Flow Turbines," etc. Included are photos, line drawings, a bibliography and directory of U.S. and foreign manufacturers and distributors.

Number of Pages: 101
Cost: $4.95

Title: **PRESENT VALUE: CONSTRUCTING A SUSTAINABLE FUTURE**
Source: Friends of the Earth
124 Spear Street
San Francisco, CA 94015
Date: 1980
Author: Coe, Gigi

Description:
This book describes examples of renewable energy projects in California. The book has three parts. The first describes active and passive solar retrofits, utilizing the technology for preheating water for dairy farm use to warm cows' teats and sterilizing the stainless steel holding tank for the milk, which results in savings on annual fuel bills. The second part of the book "shows how these basic concepts can be integrated and used in different structure." Part three describes ways to build "self-reliant communities."

Cost: $5.95

Title: **JOJOBA IN A NUTSHELL**
Source: Jojoba Center - Noble Oil Laboratories, Inc.
873 Linden Avenue
Carpinteria, CA 93013
Date: 1982
Author. Scarlett, P.L.

Description:
Jojoba is a native California evergreen, drought resistant shrub, which grows in marginal soil, with low fertilizer and cultivation requirements. It produces an annual seed (nut) crop from which a vegetable oil, suitable for specialized industrial uses and superior to non-renwable crude oil, can be refined. This is a handbook for jojoba.

Number of Pages: 60
Cost: $5.00 + $2.00 Shipping

Title: **INDIANA GRAIN FERMENTATION ALCOHOL PLANT**
Source: Indiana Department of Commerce
State House, Room 336
Indianapolis, Indiana 46204
Date: 1976
Author: Brackett, A.T. and others

Description:
This book covers anhydrous production and addresses cattle feedlots as well as other closed system scenarios. This is a process and economic survey of a large scale system.

Number of Pages: 80
Cost: $13.50

Title: **APPLICATION OF SOLAR HEATED WATER TO GREENHOUSES**
Source: Institute of Food and Agricultural Sciences
University of Florida
Gainesville, FL
Date: 1976
Author: Lucas, R.F. and Baird, C.D.

Description:
This bulletin explains how a solar heated water system works and how to figure your greenhouse heating needs and your equipment needs.

Number of Pages: 30
Cost: Contact Source

Title: **PASSIVE SOLAR HEATING DESIGN**
Source: John Wiley & Sons, Inc.
P.O. Box 063
Somerset, NJ 08873
Date: 1980
Author: Lebens, Ralph M.

Description:
This book begins with a description of both active and passive systems. The workbook sections offer rules of thumb and design tools for working with passive systems, and include both design presentations and performance analyses.

Number of Pages: 234
Cost: $49.95

Title: **LOW-COST DEVELOPMENT OF SMALL WATER-POWER SITES**
Source: META Publications
P.O. Box 128
Marbemount, WA 98267
Author: Hamm, H.W.

Description:
This booklet gives information for step-by-step process of developing small-scale hydro power sites. Descriptions include those of water wheels, a small 12" diameter crossflow turbine and the Pelton wheel. Small earth dam construction is also covered.

Cost: $3.00

Title: **MAKING ALCOHOL FUEL - RECIPE AND PROCEDURE**
Source: Micro-Tec Laboratories, Inc.
Rt. 2, Box 19
Logan, Iowa 51546
Date: 1979
Author: Crombie, Lance

Description:
This is a pamphlet which provides current, practical information which includes temperatures and yeast data, how to apply for a still permit, and other how-to ideas.

Number of Pages: 40
Cost: $4.50

Title: **DESIGN OF A TWO-BUSHEL PER DAY CONTINUOUS ALCOHOL UNIT**
Source: National Center for Appropriate Technology
P.O. Box 3838
Butte, Montana 59701
Date: 1947
Author: Altsheller, William B., and others

Description:
This paper, prepared by 5 Seagram scientists, is one of the first papers on fuel production which documents the use of sulfuric acid hydrolysis and continuous fermentation that yields 190 proof alcohol in 11 hours.

Number of Pages: 5 (photocopied)
Cost: 60¢

Title: **THE DAIRY ENERGY CONNECTION**
Source: National Independent Dairy-Foods Association
1625 K Street
Washington, DC 20006
Date: 1980
Author: Solar Energy Information Data Bank

Description:
This is a summary of alcohol plants.

Number of Pages: 157
Cost: $11.00

Title: **FUEL FROM FARMS, A GUIDE TO SMALL-SCALE ETHANOL (GRAIN ALCOHOL(PRODUCTION**
Source: The National Technical Information Service, U.S. Dept. of Commerce
5285 Port Royal Rd.
Springfield, Va 22161
Date: 1980
Author: Solar Energy Information Data Bank

Description:
This is a summary of alcohol plants.

Number of Pages: 157
Cost: $11.00

Title: **MAKING YOUR OWN MOTOR FUEL**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 51501
Author: Stetson

Description:
A how-to book to make and operate both 5 and 55-gallon stills. Included are complete descriptions and detailed illustrations of a still that can produce 700 gallons of alcohol a week. Alcohol from this still has been used "straight" in cars and trucks with only a few minor engine modifications which are thoroughly explained.

Number of Pages: 192
Cost: $7.00

Title: **METHANE: PLANNING A DIGESTER**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Meynell

Description:
A fairly detailed handbook that shows how to build a digester to treat sewage and produce methane for use in homes, businesses and on the farm. Illustrated with bibliography.

Number of Pages: 150
Cost: $5.00

Title: **PRACTICAL BUILDING OF METHANE POWER PLANTS**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Fry

Description:
How to design and build your own displacement-type methane generating plant for homestead or large-scale use, written by one of the pioneer experimenters and present-day expoerts. Includes charts, diagrams, and photos.

Number of Pages: 96
Cost: $2.00

Title: **THE PRODUCTION OF METHANE FROM MANURE**
Source: Prof. A.W. Anderson, Microbiology Dept.
Bio Science Building, OSU
Corvallis, OR 97330

Description:
A primer of methane potential in Oregon.

Cost: Contact Source

Title: **RADICAL TECHNOLOGY**
Date: 1976
Authors: Boyle, Godfrey and Harper, Peter; Editors

Description:
A thought-provoking collection of original articles concerning the reorganization of technology along more humane and ecologically sound lines. Seven sections are in the book: Food, Energy, Shelter, Autonomy, Materials, Communication, Other Perspectives. Also included is a comprehensive directory of the literature and active organizations in Radical Technology. A large section is devoted to agricultural practices. Of interest to Home Economics is the article on textiles, "Man Maketh the Clothes," which describes various sources and characteristics of fibres, then procedes to describe the process of turning fibres into cloth.

Number of Pages: 304
Cost: Contact Source

Title: **ENERGY AUDIT FOR GROWERS - A SELF-INSPECTION GUIDE TO REDUCE ENERGY COSTS**
Source: Society of American Florists
901 N. Washington St.
Alexandria, VA 22314
Author: U.S. Dept. of Energy

Description:
This handbook was developed to help wholesale growing operations cut the cost of energy in their businesses. It shows how to recognize and act on energy waste in heating, ventilating, soil sterilizing and watering, artificial lighting, efficient use of space, delivery and refrigeration.

Number of Pages: 94
Cost: $10.00

Title: **EFFICIENCIES OF METHANOL PRODUCTION FROM GAS, COAL, WASTE OR WOOD**
Source: Solar Energy Research Institute (SERI)
1536 Cole Blvd.
Golden, CO 80401
Date: 1976
Author: Reed, Dr. Thomas B.

Description:
Reed, who is one of the foremost experts on methanol, covers automobile modifications and statistics, fuel and fertilizer reproduction, etc.in this publication.

Number of Pages: 12
Cost: Free

Title: **ALCOHOL AS A FUEL**
Source: Small Farm Energy Project, Center for Rural Affairs
P.O. Box 736
Hartington, NE 68739

Description:
A special reprint of articles from back issues of Small Farm Energy Project News describing potentials of farm alcohol production.

Number of Pages: 8
Cost: 75¢

Title: **AN ANALYSIS OF FARM ALCOHOL FUEL**
Source: Small Farm Energy Project, Center for Rural Affairs
P.O. Box 736
Hartington, NE 68739

Description:
A brief overview of the various considerations required for implementing farm alcohol production, including discussion of economics, net energy, environmental factors, and various technologies.

Number of Pages: 4
Cost: 50¢

Title: **FARM ENERGY CONSERVATION CHECKLIST**
Source: Small Farm Energy Project
Center for Rural Affairs
P.O. Box 736
Hartington, NE 68739

Description:
An Energy Project Checklist for dry-land farming operations with energy saving tips for farm yard, farm buildings, fuel handling, dairies, tractors and motor vehicles, fertilizer, grain drying, field operations and other areas outside the home.

Number of Pages: 2
Cost: 25¢

Title: **FARM ENERGY PRIMER**
Source: Small Farm Energy Project, Center for Rural Affairs
P.O. Box 736
Hartington, NE 68739

Description:
Includes several special reports and summaries as well as the following series of flyers on energy alternatives:

#1. "The Kaiser Wind Electric System" - connecting a wind system to the REA.

#2. "The Fish Solar Grain Dryer" - describes 3 solar systems on round grain bins, 6,000 bu. and smaller.

#3. "The Vertical Wall Solar Collector" is a flyer on solar energy for heating several different types of homes.

#4. "The Fish Solar Greenhouse" - a description of the solar and wood heated greenhouse attached to the home of one cooperating family of the Energy Project.

#5. "The Solar Food Dryer & Window Box Collector" - describes one type of food dryer used by Project cooperators, in addition to the solar window box used for space heating.

#6. "Heating With Wood" - home-built and commercial systems.

#7. "Solar Water Heating" - this focus discusses various types of water heaters used on primarily dairy barns at the Energy Project.

#8. "Composting of Farm Manure" - composting is recognized as a process of handling manure with the potential of conserving nutrients and therefore lowering fertilizer purchases.

#9. "Solar Farrowing Barn" - an analysis of a solar system retrofitted to an old barn used for farrowing hogs.

#10. "Portable Solar Collector" - this collector is on wheels and is used for home heating and grain drying.

#11. "Farm Energy Conservation" - includes discussion on conservation of energy in the home and on the farm.

Number of Pages: over 50 pages
Cost: Primer - $3.00
Flyers - 50¢ ea.

Title: **ALCOHOL FUELS PROGRAM TECHNICAL REVIEW**
Source: Editor, Alcohol Fuels Process Newsletter
Dr. Larry Douglas
Solar Energy Research Institute
1617 Cole Boulevard
Golden, CO 80401
Date: 1981
Author: SERI

Description:
This technical review describes various methods of producing alcohol fuels and what is being done at various universities.

Number of Pages: 98
Cost: Free

Title: **DESIGN OF SMALL DAMS**
Source: Superintendent of Documents, U.S. Government Printing Office
North Capital & H
Washington, D.C. 20402
Date: 1973

Description:
This is the definitive text on the design and construction of earth fill dams. The dams discussed and illustrated are medium sized or large, with considerable information on ecological impacts, soil geology, soil placement, construction techniques.

Number of Pages: 816
Cost: $17.00

Title: **A NEW ENERGY ETHIC FOR FARMERS**
Source: VOCED
Vol. 54, No. 1; Pages 47-50
January 1979
Date: 1979
Author: Price, Donald R.

Description:
This article describes energy used and problems in agricultural production requiring conservation practices and reviews implications for vocational agriculture training. Agricultural energy conservation techniques, heat exchangers and heat transfer principles, and alternative energy sources such as solar, wind and biomas conversion technology are discussed.

Title: **ENERGY CONSERVATION IN THE RURAL HOME - LANDSCAPING TO CUT FUEL COSTS**
Source: U.S. Department of Agriculture
Office of Governmental and Public Affairs
Washington, DC 20250
Date: 1981
Author: U.S. Department of Agriculture

Description:
Planting trees and shrubs around your home will help reduce heating and cooling costs. The choice and placement of plants will help reduce these costs. These topics are covered in the pamphlet: wind effects, windbreak benefits, impact of a 3-row windbreak of 25' trees, foundation planting, planting for shade, etc. Planting diagrams are given, along with good how-to illustrations.

Number of Pages: 4
Cost: Free - Single Copy

Source: U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Date: 1977

Description:
Benson, V.M. A GUIDE TO ENERGY SAVINGS: FOR THE POULTRY PRODUCER (#PB-270-072)
Frank, G.G. A GUIDE TO ENERGY SAVINGS: FOR THE DAIRY FARMER (#PB-270-074)
Schrenbeing, A. A GUIDE TO ENERGY SAVINGS: FOR THE FIELD CROPS PRODUCER (#PB-270-071)
Van Arsdale, R. A GUIDE TO ENERGY SAVINGS: FOR THE LIVESTOCK PRODUCER (#PB-270-073)
Wynn, N.S. A GUIDE TO ENERGY SAVINGS: FOR THE ORCHARD GROWER (#PB-270-075)
Wynn, N.S. A GUIDE TO ENERGY SAVINGS: FOR THE VEGETABLE PRODUCER (#PB-270-076)

Architecture
Instructional Materials

Title: SOLAR ENERGY - INSTRUCTIONAL MATERIALS
Source: Arkansas State Department of Education
Division of Vocational, Technical and Adult Education
Little Rock, Arkansas
Date: 1980
Author: Jordan, Kenneth; Thessing, Dan

Description:
This document is one of five learning packets on alternative energy developed as part of a descriptive curriculum research project in Arkansas. The overall objectives of the learning packets are to improve the level of instruction in the alternative energies by vocational exploration teachers, and to facilitate the integration of new content on energy into existing vocational programs. Each learning packet contains unit objectives, information, transparency masters, lecture outline, suggested activities, student assignment sheets, tests, and answers to the tests. This unit on solar energy covers the following topics: introduction to solar energy; buying and maintaining solar equipment; basic solar heating system; materials for solar collectors; and passive solar energy (heating).

Cost: Contact source

Title: DESIGN OF SYSTEMS FOR THE SOLAR HEATING AND COOLING OF RESIDENTIAL BUILDINGS
Source: EARS
Box 545
La Veta, CO 81055
Date: 1977
Author: Winn, Byron, Daraki, Susumu, and Lof, Geo.

Description:
Textbook to train home designers and builders in the fundamentals of solar hydronic and air systems for space heating and cooling and domestic hot water heating for residential buildings. With SIZING, INSTALLATION, AND OPERATION OF SYSTEMS FOR THE SOLAR HEATING AND COOLING OF RESIDENTIAL BUILDINGS, it forms a complete background in the design of solar systems.

Number of Pages: 60
Cost: $10.50

Title: SOLAR CONCEPTS
Source: Maine Audubon Society
118 U.S. Route One
Falmouth, ME 04105
Date: 1979
Author: Gorham, Jonathan W.

Description:
This unit consisting of 12 chapters which examine renewable energy sources, the principals of heat transfer, hot water systems, and active and passive solar designs for homes is designed to provide vocational students with the technical skills required to design and install solar systems. The teacher's guide includes learning objectives and a brief bibliography for each chapter, pre and post tests, and detailed instructions and plans for construction of six student projects including an altimeter, parabolic concentrator and thermal shutters.

Number of Pages: Teacher's - 135

Cost: Contact Source

Title: ENERGY CONSERVATION THROUGH ARCHITECTURAL DESIGN
Source: Man/Society/Technology
Vol. 36, No. 8; Pages 240-244
May-June 1977
Date: 1977
Author: Thomson, Robert C., Jr.

Description:
A teaching unit related to architecture is described. It is aimed to create an awarness of and an appreciation for the possibilities for energy conservation in architecture. This unit can be adapted for use in many industrial programs due to the variety of activities.

Architecture
Technical Materials

Title: A DECADE'S DIFFERENCE—EXPANDED SCHOOL, SAME ENERGY USE
Source: American School and University
Vol. 53 No. 1, Pages 38-40
September 1980
Date: 1980

Description:
This article describes how a junior high school in Missouri was transformed into a high school over twice as large, using no more gas for heating than before remodeling.

Title: DESIGNING TO SAVE ENERGY
Source: American School and University
Vol. 49, 6; pp. 34-35, 37.
April 1977
Date: 1977
Author: Santamaria, Joseph W.

Description:
This article describes how the size of Alvin Community College Campus in Texas was tripled in size, and at the same time due to the efforts of architects and engineers analyzing the current energy demands, the shape and size of the building was dictated by energy considerations. Necessary cutbacks on lighting, wasted heat and extensive insulation were used.

Title: ROCK CREEK CENTER, PORTLAND COMMUNITY COLLEGE, PORTLAND, OREGON
Source: American School and University
Vol. 49, 7 Pages 32-33, May 1977
Date: 1977

Description:
The Portland Community College received an award in this magazine's college and university architectural competition for the Rock Creek Center, which is designed like a shopping center that lets people view the various activities inside.

Title: ENERGY PRIMER: SOLAR, WATER, WIND, AND BIOFUELS
Source: Dell Publishing Co., Inc.
1 Dag Hammarskjold Plaza, 245 E. 47th St.
New York, NY 10017
Date: 1978
Author: Merrill, Richard; Gage, Thomas

Description:
This book includes articles on energy conservation, solar, solar architecture, water, wind biofuels, and integrated systems.

Number of Pages: 256
Cost: $7.95

Title: THE AUTONOMOUS HOUSE: DESIGN AND PLANNING FOR SELF-SUFFICIENCY
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1975
Author: Vale, Branda & Robert

Description:
Basically a design study, this book covers solar, wind, heat pumps, waste recycling, water purification, batteries, fuel cells, and heat storage. Each topic is dealt with in an overview of worldwide research. The various systems are integrated and applied to a model house in England. Bases on research conducted at Cambridge University School of Architecture. Illustrations, bibliography, index.

Cost: $4.95

Title: **ENERGY CONSERVATION IN ARCHITECTURE**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1974
Author: Watson, Don, AIA & Barber, Everett

Description:
A "design with climate" approach to architecture. The article reviews the climatic factors that impact on buildings in temperate zones such as Connecticut by reference to designs used in more severe climates. Topics include thermal impact, underground building, sun lighting, natural ventilation, sun monitor, fireplaces, solar windows, reflective operable wall, Sky-Therm roof, liquid media collectors, pyramidical optics installation. From the CONNECTICUT ARCHITECT. Numerous charts, photos and diagrams.

Number of Pages: 12
Cost: 1-9 copies - 60¢
Price decreases in quantity

Title: **ENERGY EFFICIENT COMMUNITY PLANNING**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1979
Author: Ridgeway, James

Description:
This book explores new financing mechanisms, housing designs based on low-rise, high density architecture. It also analyzes the economics and job implications of a solar transition and concludes with a check list for energy actions to take use from reliance on fossil fuels to renewable alternatives.

Number of Pages: 221
Cost: $9.95

Title: **A PLANNERS HANDBOOK ON ENERGY**
Source: Governor's Energy Office
The Capitol
Tallahassee, FL 32301

Description:
This publication gives information related to energy consumption in residential buildings. Dealing with house design, site selection, materials, construction techniques and selection of appliances and systems, this unit includes tables and charts relating to energy consumption.

Number of Pages: 270
Cost: Contact Source

Title: **ARCHITECTURE: DESIGN, ENGINEERING, DRAWING**
Source: McKnight Publishing Co.
808 Eldorado Road
Bloomington, IL 61701
Date: 1979
Author: Spence, William P.

Description:
This text includes information on residential and small commercial building planning and design, electrical and mechanical systems, and structural considerations. It presents basic concepts of solar heating and cooling.

Number of Pages: 581
Cost: $12.87

Title: **ENERGY RESEARCH MOTIVATES STUDENTS**
Source: Man/Society/Technology
Vol. 37, No. 8; Pages 16N-160
May/June 1978
Date: 1978
Author: Reed, Starling C.

Description:
The article describes various projects and photographs of some of the models that were built by drafting students at a junior high as a result of an interest in solar energy.

Title: **EARTH SHELTERED HOUSING DESIGN: GUIDELINES, EXAMPLES, AND REFERENCES**
Source: Van Nostrand Reinhold Co.
135 W. 50th St.
New York, NY 10020
Date: 1979
Author: The Underground Space Center

Description:
Thorough and intelligent manual for underground home design; includes annotated bibliography, directory, and product information.

Number of Pages: 48
Cost: $9.95

Automotive

Instructional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: E.A. Campbell, et. al.

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Title: ENERGY AWARENESS CURRICULUM, 1980
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This curriculum guide contains course content for a series of "mini-courses" that can be presented in an adult continuing education program in area technical-vocational schools and community colleges. The program consists of nine modules, each divided into units and including learning objectives and student handouts. The modules cover the following areas: (1) Awareness of the energy dilemma—an introduction and prerequisite for the other courses; (2) Surveying energy usage—a brief assessment of the energy used in the United States by the various energy-user categories; (3) Utility bills and economics of energy conservation—a discussion of energy pricing, the development of power utility rate structure, and natural gas rate fluctuations; (4) How to search for energy conservation opportunities—a presentation of opportunities for the individual and the community to save and to conserve energy in the automobile, the home, and the use of appliances; (5) Lighting conservation opportunities—lighting for energy conservation; (6) Hot water heating conservation opportunities—techniques for selecting, installing, and operating the domestic hot water heater; (7) Appliance energy conservation opportunities—techniques for purchasing, operating, and maintaining appliances; (8) Building construction versus energy consumption—factors involved in building an energy-efficient home; and (9) Heating, ventilating, and air conditioning conservation—principles of heating and cooling buildings. Lists of printed and audiovisual resources are included.

Cost: Contact Source

Title: **ENERGY ACTIVITIES FOR INDUSTRIAL EDUCATION**
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1977
Author: Instructors of Industrial Subjects

Description:
This publication consists of 21 instructional activities related to energy conservation in some industrial subjects. Written by industrial educators, some lessons include: Construction of a Hydroelectric Generator, Insulation Efficiency Test, Solar Water Heating, Compare Power Consumption of Various Electrical Devices, 4 lessons for the automotive class and many others.

Number of Pages: 21 activities
Cost: $1.00

Title: **ENERGY EFFICIENCY FOR AUTOMOTIVE INSTRUCTORS**
Source: Nebraska Energy Office
Box 95085
Lincoln, NE 68509
Date: 1980
Author: Scharmann, L.; Lay, G. (Editors)

Description:
This curriculum guide includes six units that are designed to be incorporated into existing auto mechanics programs. Written in outline form, including rationale, preparation, instructional time required, activities, and references, these units discuss the driver and public awareness, ignition systems, the fuel system, brakes and suspension systems, transmissions, and alternate fuel sources. Conservation is stressed in each of these areas.

Number of Pages: 21
Cost: Contact Source

Title: **ENERGY CONSERVATION FOR VOCATIONAL STUDENTS**
Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428

Date: Published in 1981
Author: Developed at Navarro College, Corsicana, Texas

Description:
An 11-module curriculum designed to provide practical applications of energy conservation for both secondary and postsecondary vocational programs, and for adult/continuing education. Includes training in identifying, monitoring, managing, and curbing energy usage. Modules can be used as independent units, collectively as a course of study, as an integral part of a conventional vocational course. Relate well with home economics, agriculture, building trades, electronics, air conditioning and refrigeration, automotive, economics, cooperative education, physics, and biology. The flexible format includes text/lecture for the instructor; laboratory projects for students; charts, graphs, tables, and transparency masters; pre- and posttests; and a vast bibliography.

Number of Pages: 1,275
Cost: $30.00

Title: **ENERGY, ENGINES, AND THE INDUSTRIAL REVOLUTION**
Source: U.S. Department of Energy
Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Date: 1977

Description:
This unit consisting of five activities examines the importance of energy in the industrial revolution, changes in lifestyles as a result of industrialization, and energy conversion in the automobile. Includes a reader, "Energy, Engines, and the Giant Step of the Industrial Revolution," a time line of industrial development and maps and tables describing shifts in population in England during the early industrial revolution (1750-1900).

Number of Pages: 82
Cost: Free

Automotive
Technical Materials

Title: VO-TECH STUDENTS CONSTRUCT ENERGY-SAVING CAR
Source: American Vocational Journal
Vol. 52, 4 Pages 54-56 April 1977
Date: 1977
Author: Lund, J. Preston

Description:
This article describes the fluid power technology program at the Nennepin Technical Center in Minneapolis, where a prototype car was designed by students. This car, the students believe, will get 75 miles per gallon and cruise at 70 miles per hour.

Title: WHAT HAPPENS WHEN WE RUN OUT OF GASOLINE
Source: Community College Review
Vol. 6; No. 1; Pages 21-4, Summer 1978
Date: 1978
Author: Vaughan, George B.

Description:
This article explores the impending crisis of the energy shortage faced by community colleges which depend a great deal on transportation. Suggestions are made for mass-transit systems and campus decentralization as some possible solutions.

Title: MILEAGE MAKER TIPS
Source: Amoco Educational Services
Public Affairs - MC - 3705
P.O. Box 5910-A
Chicago, IL 60680

Description:
Gives tips for conserving energy when operating an automobile. Discusses use of proper octane rating for gasoline, tires and brakes, driving skills, and maintenance tips for improving mileage up to 10 percent.

Number of Pages: Booklet
Cost: Free

Title: WHAT HAPPENS WHEN WE RUN OUT OF GASOLINE
Source: Community College Review
Vol. 6; No. 1; Pages 21-4, Summer 1978
Date: 1978
Author: Vaughan, George B.

Description:
This article explores the impending crisis of the energy shortage faced by community colleges which depend a great deal on transportation. Suggestions are made for mass-transit systems and campus decentralization as some possible solutions.

Title: THE ENERGY CONSUMER, JAN. 1980 ISSUE
Source: DOE, Office of Consumer Affairs
Room 8GO82
Washington, DC 20585
Phone Toll Free: 1-800-533-5333
Date: 1980

Description:
Descriptions of policy, history, economics, resources in each state, and other publications are included, which make this the most up-to-date source for alcohol fuels information.

Cost: Contact Source

Title: ALTERNATOR SECRETS
Source: EARS
Box 545
La Veta, CO 81055
Date: 1977
Author: Lindsay, T.J.

Description:
Automobile alternators, when modified, can provide variable direct current at 1 to 120 volts for battery charging, hot charging, light arc welding, or for running AC-DC appliances and lights. Another simple modification provides AC power to run transformer operated appliances such as televisions.

Number of Pages: 22
Cost: $3.00

Title: **BROWN'S ALCOHOL MOTOR FUEL COOKBOOK**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1979
Author: Michael Brown

Description:
Detailed instructions with many photos for modifying carburetors and engines for alcohol fuel, and for building and operating an alcohol skill. Discussions on Engine Basics, Malting, Fermenting, Distilling, Testing for Proof, Stripper Plates and Beer Stills, A Solar Still, and Dealing with Big Brother.

Number of Pages: 141
Cost: $9.95

Title: **SECRETS OF LEAD ACID BATTERIES**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1979
Author: Lindsay, T.J.

Description:
Although lead acid batteries may need little attention when used in autos, many auto batteries will quickly fail in alternate energy applications. This tells how batteries are rated, built, the different types of charging, how they discharge, why they fail. Techniques to test batteries to meet minimum requirements are included.

Number of Pages: 44
Cost: $5.00

Title: **INDUSTRIAL ENERGY CONSERVATION: 101 IDEAS THAT WORK**
Source: Energy Management Section,
General Motors Corporation
Rm 250 Argonaut A
Detroit, MI 48202
Date: 1977

Description:
Designed to reduce costs in an automobile plan, this book prepared for supervisors and workers in automobile industry plants covers areas including product specification changes, heat recovery applications, central control and monitoring systems, improved equipment controls, and air supply and exhaust systems. Gives specific examples of problems and solutions by which energy waste was reduced, the cost and the savings.

Number of Pages: 100
Cost: Contact Source

Title: **FUEL ALCOHOL U.S.A.**
Source: Fuel Alcohol U.S.A.
P.O. 9547
Kansas City, Missouri 64133
Date: Monthly newsletter

Description:
A monthly magazine which discusses every aspect of alcohol fuels including production, sales outlets, government regulations and meetings, with ethanol as an emphasis.

Cost: $16.00

Title: **BROWN'S ALCOHOL MOTOR FUEL COOKBOOK**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Brown

Description:
A handy, step-by-step guide that shows how to produce your own fuel for as little as 43¢ per gallon. Includes clear, concise, detailed instructions for building several stills, brewing the fuel, and adjusting carburetors to run on alcohol. Well-illustrated.

Cost: $10.00

Title: DIRECT USE OF THE SUN'S ENERGY
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Daniels

Description:
An excellent book on solar energy which describes how to use sun power to cook with, how to store it, heat with it, run engines on it, and more.

Number of Pages: 271
Cost: $2.50

Title: ELECTRIC VEHICLES: DESIGN & BUILD YOUR OWN
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Hackleman

Description:
Easy-to-read look at how to design, build, power, and license your own non-polluting electric vehicle, written by an expert in the field. How to optimize such factors as torque, power capacity, range, weight, and top speed. Also, how to choose the right motor and mate it to the right drive train, all about batteries, controls and circuits, extensive bibliography and much more are included.

Number of Pages: 205
Cost: $10.00

Title: HOW TO POWER A GASOLINE ENGINE WITH WOOD
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Eoff and Post

Description:
A reprint of a technical report that details a project conducted at the University of Florida. A six-cylinder pickup truck was converted to runon combustible gas created by burning wood. Includes line drawings, supplier list and bibliography.

Number of Pages: 13
Cost: $4.50

Title: HOW TO RUN YOUR CAR ON COAL OR CHARCOAL
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Ames

Description:
This technical manual explains how to convert your vehicle from expensive gasoline to produce gas made from plentiful, inexpensive coal or charcoal. Has line drawings.

Number of Pages: 38
Cost: $3.00

Title: MAKING YOUR OWN MOTOR FUEL
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 51501
Author: Stetson

Description:
A how-to book to make and operate both 5 and 55-gallon stills. Included are complete descriptions and detailed illustrations of a still that can produce 700 gallons of alcohol a week. Alcohol from this still has been used "straight" in cars and trucks with only a few minor engine modifications which are thoroughly explained.

Number of Pages: 192
Cost: $7.00

Title: PROPANE PACKAGE
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: The Mother Earth News

Description:
Includes The Mother Earth News technical report HOW TO CONVERT YOUR VEHICLE TO PROPANE, and Ronald Anderson's two booklets THE COMPLETE LP GAS-GASOLINE CONVERSION and THE COMPLETE LP GAS-GASOLINE TROUBLE-SHOOTER'S GUIDE.

Cost: $15/set

Title: WOOD GAS GENERATOR FOR VEHICLES
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Nygards

Description:
This manual describes how to convert a vehicle to run on gas produced by the partial combustion of wood chips. Includes illustrations.

Number of Pages: 18
Cost: $3.00

Title: SLASHING AERODYNAMIC DRAG: HOW COMPUTERS REDESIGN A CAR FOR MORE MPG
Source: Popular Science
Vol. 215, No. 5, Nov. 1979, Pages 72-75
Date: 1979
Author: Norbye, Jan P.

Description:
This article describes a car, designed for low aerodynamic drag without loss of directional stability, which is a fully functional 4-passenger car. In highway driving, 70% of the car's energy consumption goes to overcoming aerodynamic drag, thus a car with low aerodynamic drag will produce higher mpg.

Business

Instuctional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: E.A. Campbell, et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Title: COMPUTATIONS ABOUT THE SOURCES AND CONSERVATION OF ENERGY
Source: Florida Office of Environmental and Energy Education
Knott Building
Tallahassee, FL 32301

Description:
This booklet provides an array of math problems and exercises developed to lead to energy conservation. These problems and exercises have been field tested in classrooms and can be useful for basic business mathematics courses.

Number of Pages: 80
Cost: Contact Source

Business

Technical Materials

Title: SOLAR ENERGY AND THE FINANCIAL COMMUNITY
Source: Florida Solar Energy Center
300 State Road 401
Cape Canaveral, FL 32920
Date: 1981
Author: Kiell, Hilary and Ventre, Dr. Gerard G.

Description:
This publication is a handbook for Florida lenders, appraisers, real estate agents and insurers. It attempts to familiarize the reader with those solar technologies that are cost-effective at present, and provides the reader with the necessary information to minimize investment risk.

Cost: Free

Title: ENERGY MANAGEMENT GUIDE FOR LIGHT INDUSTRY AND COMMERCE (NBS Handbook 120)
Source: U.S. Government Printing Office,
Superintendent of Documents
North Capital & H
Washington, DC 20402
Date: 1976

Description:
This booklet, directed toward managers of small businesses, such as motels, food stores, job shops and small assembly plants, presents information on how to create an energy management program and conduct an energy management program and conduct an energy audit. Includes a checklist for reducing energy usage, cost analysis procedures and sources of outside help. Best used as a teacher resource.

Number of Pages: 23
Cost: Contact Source

Title: PROVIDING FOR ENERGY EFFICIENCY IN HOMES AND SMALL BUSINESS
Source: U.S. Department of Energy, Office of Consumer Affairs
Education Division
Washington, DC 20585

Description:
A technically up-to-date and quite complete guide.

Cost: Contact Source

Construction
Instructional Materials

Title: PROVIDING FOR ENERGY EFFICIENCY IN HOMES AND SMALL BUILDINGS - STUDENT WORKBOOK
Source: DOE Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Date: 1980

Description:
This student manual presents a training program designed to educate students and individuals in the importance of conserving energy and to provide for developing skills needed in the application of energy-saving techniques that may result in energy efficient buildings. Alternatives are provided in this program to allow for specific instruction in energy-saving methods and procedures, or for integration with construction courses. It may also be used for self-paced instruction. The materials are divided into three parts: (1) Understanding and practicing energy conservation; (2) Determining amount of energy lost or gained in a building; and (3) Determining which practices are more efficient and installing materials.

Cost: Free

Title: ENERGY AWARENESS CURRICULUM, 1980
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This curriculum guide contains course content for a series of "mini-courses" that can be presentedin an adult continuing education program in area technical-vocational schools and community colleges. The program consists of nine modules, each divided into units and including learning objectives and student handouts. The modules cover the following areas: (1) Awareness of the energy dilemma—an introduction and prerequisite for the other courses; (2) Surveying energy usage—a brief assessment of the energy used in the United States by the various energy-user categories; (3) Utility bills and economics of energy conservation—a discussion of energy pricing, the development of power utility rate structure, and natural gas rate fluctuations; (4) How to search for energy conservation opportunities—a presentation of opportunities for the individual and the community to save and to conserve energy in the automobile, the home, and the use of appliances; (5) Lighting conservation opportunities—lighting for energy conservation; (6) Hot water heating conservation opportunities—techniques for selecting, installing, and operating the domestic hot water heater; (7) Appliance energy conservation opportunities—techniques for purchasing, operating, and maintaining appliances; (8) Building construction versus energy consumption—factors involved in building an energy-efficient home; and (9) Heating, ventilating, and air conditioning conservation—principles of heating and cooling buildings. Lists of printed and audiovisual resources are included.

Cost: Contact Source

Title: SOLAR CURRICULUM GUIDES, 1980
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This document contains an outline for a curriculum to train solar energy technicians in community colleges. The guide contains eight courses, each of which is divided into one to five modules. Modules, in turn, are divided into units, and units contain student handouts appropriate to the material. The following eight courses are included in this curriculum guide: (1) Solar applications and future technology; (courses 2 and 3 missing); (4) Introduction to solar energy, with modules on the sun and radiation, solar energy collection, solar energy storage, solar systems, and future outlook for solar; (5) Control theory and application, with a module on general control; (6) Materials and fabrication, with modules on basic materials, fabrication, and air distribution; (7) Collectors and energy storage, with modules on collectors, solar storage, and installation; and (8) Solar heating and cooling systems, with modules on system designs, retrofitting, and servicing. Prerequisites for persons entering the solar energy technician curriculum and a list of resources are included.

Cost: Contact Source

Title: SOLAR TECHNOLOGY CURRICULUM, 1980
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This curriculum guide contains lecture outlines and hand outs for training solar technicians in the installation, maintenance, and repair of solar energy hot water and space heating systems. The curriculum consists of four modular units developed to provide a model through which community colleges and area vocational/technical schools can respond to training requirements and manpower needs as the market for solar systems progresses. The four units can serve as an extension of an existing occupational program or as a short-term intensive training program for individuals engaged in the heating and air conditioning industry. The four units include solar radiation and introducitor to solar technology, solar construction techniques and materials, solar domestic hot water systems, and solar space heating systems. Each unit consists of performance objectives, presentation, training aids, and references; and some units contain learning activities. Twenty handouts for students cover the following topics: the Earth's orbit, solar energy, heat transfer, Kansas laws concerning energy conservation and solar energy systems, terminology, basic systems, safety, soldering and brazing, symbols, valves, pumps, availability of solar energy, residential hot water requirements, design calculations, direct heating—thermosiphon system, direct heating—pumped system, indirect heating—pumped system with heat exchanger, active solar heating and cooling, commong operating modes, and common problems.

Cost: Contact Source

Title: ENERGY CONSERVATION THROUGH ARCHITECTURAL DESIGN
Source: Man/Society/Technology
Vol. 36, No. 8; Pages 240-244
May-June 1977
Date: 1977
Author: Thomson, Robert C.,

Description:
A teaching unit related to architecture is described. It is aimed to create an awareness of and an appreciation for the possibilities for energy conservation in architecture. This unit can be adapted for use in many industrial programs due to the variety of activities

Title: SOLAR CONCEPTS
Source: Maine Audubon Society
118 U.S. Route One
Falmouth, ME 04105
Date: 1979
Author: Gorham, Jonathan W.

Description:
This unit consisting of 12 chapters which examine renewable energy sources, the principals of heat transfer, hot water systems, and active and passive solar designs for homes is designed to provide vocational students with the technical skills required to design and install solar systems. The teacher's guide includes learning objectives and a brief bibliography for each chapter, pre and post tests, and detailed instructions and plans for construction of six student projects including an altimeter, parabolic concentrator and thermal shutters.

Number of Pages: Teacher's - 135
Student's - 130
Cost: Contact Source

Title: ENERGY CONSERVATION IN BUILDING TECHNOLOGY - 3RD EDITION (1979)
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1979
Author: Catalog No. 614

Description:
This is an update of the 2nd Edition, intended more for teacher use. Contains new data, tables, and transparency masters. Requires use of IES RP-15 RECOMMENDED LEVELS OF ILLUMINATION and ASHRAE STANDARD 90-75 which are also listed.

Cost: $3.95

Title: COURSE MANUAL FOR ENERGY FUNDAMENTALS AND BUILDING HEAT TRANSFER
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1979
Author: Catalog #618

Description:
This is one of a series of modules in the Energy Education Curriculum. Its purpose is to provide the student with the ability to apply the fundamentals learned toward decisions made in the energy field and to prepare the student for further energy education. Some areas covered are energy definitions, sources of energy use in a building, factors affecting human comfort, and how to calculate heating and cooling loads as well as energy analysis on a structure.

Cost: $3.50

Title: PROJECT RETROTECH - Home Weatherization Instructor's Guide
Source: National Technical Information Service (NTIS)
U.S. Dept of Commerce
5285 Port Royal Road
Springfield, VA 22161
Author: Hill, Richard C.; Kittridge, Charles W.; Smith, Norman

Description:
This booklet was prepared as a guide to instructors in developing lesson plans for a Home Weatherization Course that promotes the use of known retro-fit technology to improve thermal characteristics and conserve energy in residential housing. Can be incorporated into construction trades program at secondary and above.

Number of Pages: 50
Cost: $7.00

Title: ENERGY EFFICIENCY FOR ARCHITECTURAL DRAFTING INSTRUCTORS
Date: 1982
Author: Nebraska Energy Office Sponsored

Description:
This curriculum guide contains five units that were designed to be incorporated into an existing program of Architectural Drafting. They can also be used as the basis for a separate course of instruction. The material is primarily intended for use at the post secondary level. Units are written in outline form. The course is designed to promote the understanding and application of some important energy conservation practices in architectural drafting. The units include: Energy Conservation Awarness, Residential Energy Consumption, Design Considerations for Residential Energy Efficiency, Residential Construction Practices and Materials and Energy Saving Devices and Methods.

Number of Pages: 35
Cost: Free

Title: ENERGY EFFICIENCY FOR BUILDING CONSTRUCTION TECHNOLOGY
Date: 1982
Author: Nebraksa Energy Office Sponsored

Description:
This curriculum guide contains five units that were designed to be incorporated into an existing program of Building Construction Technology. This material, primarily intended for use at the post-secondary level, can be used by a secondary teacher. This course is designed to promote the understanding and application of some improtant energy conservation practices in building construction. It includes the following units: Conservation Measures, Construction Techniques for Energy Efficient Buildings, Insulation Materials and R-Values, Construction Materials and Application and Solar: Passive and Active.

Number of Pages: 33
Cost: Free

Title: HEATING WITH SOLID FUELS
Source: New Jersey State Dept. of Education
Division of Vocational Education and Career Preparation
225 W. State Street
Trenton, NJ 08625

Description:
This is an instructional unit which includes a color filmstrip and cassette tape, an introduction to heating with solid fuels (wood, coal), emphasizing conservation of energy using solid fuels. Included is a bibliography and transparency master set. Also addressed are the advantages and disadvantages of the various systems, along with installation, performance and cost considerations of each.

Number of Pages: 111
Cost: Contact Source

Title: SOLAR HEATED SPACE SYSTEMS
Source: New Jersey State Department of Education, Division of Vocational Education and Career Preparation
225 W. State Street, Trenton, NJ 08625

Description:
This is an instructional unit which includes color filmstrip and cassette tape, an introduction to solar space heating concepts, advantages, disadvantages, types, construction, installation and cost considerations, emphasizing energy conservation.

Number of Pages: 83
Cost: Contact Source

Title: PROVIDING FOR ENERGY EFFICIENCY IN HOMES AND SMALL BUILDINGS
Source: Office of Consumer Affairs
Education Division
Washington, DC 20585
U.S. Department of Energy
Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Date: 1980

Description:
This is a five-booklet instruction package available in single copies from the U.S. DOE. A very comprehensive program, it is complete with a teacher's guide and student workbook.

Cost: Free

Title: **A SIMULATION OF AN ENERGY-EFFICIENT HOME**
Source: Science Activities
Vol. 18, No. 1; Pages 3-8
Feb-Mar 1981
Date: 1981
Author: McLeod, Richard J.; and others

Description:
This article gives instructions for constructing a model home to demonstrate the energy efficiency of various insulation measures. The model home is constructed from a shoe box. Included are several activities involving different insulation measures, as well as extensions of the experiment, and post-lab discussion topics.

Title: **ENERGY CONSERVATION IN CONSTRUCTION TRADES. SPECIAL PACKAGES: INSTRUCTIONAL RESOURCES FOR VOCATIONAL EDUCATION**
Source: U.S. OFFICE OF ED., Energy and Education Action Center
Reporters Building, Rm 514
300 7th St., N.W.
Washington, D.C. 20202
Date: 1978

Description:
Designed for secondary and postsecondary vocational teachers and administrators, this resource package on energy conservation in construction trades contains three sections of information. Section I provides an instructional module (developed by the Wisconsin Vocational Studies Center) on solar energy; the module is organized into seven units: using solar energy, locating the sun, solar energy systems, collection, storage, distribution, and representative solar energy systems for heating homes. Each unit generally includes objectives, information sheets, a student assignment sheet, and a unit test with answer key. Section II provides a list of instructional resource materials and organizations and agencies related to solar energy. Section III provides bibliographies related to employment impact on solar energy, marketing potential on the growth of solar energy, and solar energy system design.

Cost: Contact Source

Title: **UNDERSTANDING SOLAR ENERGY SYSTEMS**
Source: Wisconsin Vocational Studies Center
University of Wisconsin-Madison
Publications Unit
265 Educational Sciences Building
1025 West Johnson Street
Madison, WI 53706
Date: 1978
Author: Edington and Keaton; Steph[illegible]ed.

Description:
Instructional units and transparency masters useful as general course or supplement for topics including uses of solar energy, collection, storage and distribution of energy, and home heating systems.

Cost: $8.00

Title: **ENERGY CONSERVATION FOR VOCATIONAL STUDENTS**
Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428
Date: Published in 1981
Author: Developed at Navarro College Corsicana, Texas

Description:
An 11-module curriculum designed to provide practical applications of energy conservation for both secondary and postsecondary vocational programs, and for adult/continuing education. Includes training in identifying, monitoring, managing, and curbing energy usage. Modules can be used as independent units, collectively as a course of study, or as an integral part of a conventional vocational course. Relate well with home economics, agriculture, building trades, electronics, air conditioning and refrigeration, automotive, economics, cooperative education, physics, and biology. The flexible format includes text/lecture for the instructor; laboratory projects for students; charts, graphs, tables and transparency masters; pre- and posttests; and a vast bibliography.

Number of Pages: 1,275
Cost: $30.00

Title: MODULE 8: BUILDING CONSTRUCTION VERSUS ENERGY
Date: 1979

Description:
This module is the eighth in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or as part of a sequence of four modules on conservation in building construction and operation (see also modules 9-11). The objective of this module to train students in the recognition, implementation, and utilization of energy consumption and possible conservation in building construction and design. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following four units: (1) Construction considerations before building; (2) Building site and design; (3) Weatherization; and (4) Weatherization student workbook. The information in the first three units is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts/tables illustrating the text material are found at the end of the module.

Cost: Contact Source

Title: MODULE 9: HUMAN COMFORT AND ENERGY CONSERVATION
Date: 1979

Description:
This module is the ninth in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or as part of a sequence of four modules on energy conservation in building construction and operation (see also Modules 8, 10, and 11). The objective of this module is to train students in the recognition, implementation, and utilization of energy conservation for creature comfort and thermal control. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following three units: (1) The nature of thermal comfort in humans; (2) How natural climates and artificial environments are defined; and (3) Controlling buildings for thermal comfort. The information in each unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Cost: Contact Source

Title: MODULE 10: HEATING, VENTILATING, & AIR CONDITIONING
Date: 1979

Description:
This module is the tenth in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or as part of a sequence of four modules on energy conservation in building construction and operation (see also Modules 8, 9, and 11). The objective of this module is to train students in the recognition, implementation, and utilization of energy consumption and possible conservation in heating, ventilating, and air conditioning. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following four units: (1) Fundamentals of heating and cooling; (2) Heating systems; (3) Cooling systems; and (4) Duct work. The information in each unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Cost: Contact Source

Title: MODULE 11: ECONOMICS OF ENERGY CONSERVATION
Date: 1979

Description:
This module is the eleventh in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or as part of a sequence of four modules on energy conservation in building construction and operation (see also Modules 8, 9, and 10). The objective of this module is to train students in the recognition, implementation, and utilization of energy economics in energy consumption and possible energy conservation. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following four units: (1) Energy use and demand profiles; (2) Energy use and demand profiles in the home; (3) Energy conservation methods and trade-offs; and (4) Energy costing and accounting. The information in each unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several tables illustrating the text material are found at the end of the module.

Cost: Contact Source

Construction

Technical Materials

Title: A DECADE'S DIFFERENCE—EXPANDED SCHOOL, SAME ENERGY USE
Source: American School and University
Vol. 53, No. 1, Pages 38-40,
September 1980
Date: 1980

Description:
This article describes how a junior high school in Missouri was transformed into a high school over twice as large, using no more gas for heating than before remodeling.

Title: DESIGNING TO SAVE ENERGY
Source: American School and University
Vol. 49, 6; pp. 34-35, 37.
April 1977
Date: 1977
Author: Santamaria, Joseph W.

Description:
This article describes how the size of Alvin Community College Campus in Texas was tripled in size, and at the same time due to the efforts of architects and engineers analyzing the current energy demands, the shape and size of the building was dictated by energy considerations. Necessary cutbacks on lighting, wasted heat and extensive insulation were used.

Title: EXPLORING SOLAR POWER AT ZION-BENTON HIGH
Source: American Vocational Journal
Vol. 53, 1; Pages 56, 58-59
January 1978
Date: 1978
Author: Kasper, Rick

Description:
This article describes a building trades program at a high school in Illinois which has its students build single-family solar energy homes.

Title: SO EASY ENERGY PACKET
Source: Arizona Energy Office, A Division of the Office of Economic Planning & Development
1700 W. Washington, Room 504
Phoenix, AZ 85007

Description:
This packet consisting of five individual pamphlets on energy conservation in the home includes practical ways to resolve energy waste through home planning, renovation or maintenance.

Cost: Free

Title: FROM THE GROUND UP
Source: Atlantic Monthly Press
Little, Brown, and Co.
34 Beacon St.
Boston, MA 02114
Date: 1976
Author: Wing, Charles

Description:
Detailed manual on do-it-yourself home remodeling with energy conservation in mind; text and illustrations are both clear and entertaining.

Cost: $9.95

Title: THE FUEL SAVERS
Source; Brick House Publishing Co., Inc.
Jack Howell, Publisher
3 Andover, MA 01810
Date: 1978
Author: Scully, Dan; Prowler, Don; Anderson, Bruce

Description:
Describes various energy savings items as insulating curtains, window boxes, solar water heaters, etc. giving the advantages and disadvantages of each. Write for a catalog of their other books.

Number of Pages: 61
Cost: $2.75, plus $1.00 postage

Title: **SUPERINSULATED HOUSES AND DOUBLE-ENVELOPE HOUSES**
Source: Brick House Publishing Co.
34 Essex Street
Andover, MA 01810
Date: 1981
Author: Shurcliff, William A.

Description:
A superinsulated house is one which is so well insulated and air tight that nearly all necessary heat is supplied by passive solar energy, electric lights and appliances, human bodies, etc. The small amount of auxiliary heat, less than 15% of that required by a comparable pre-1974 dwelling, is supplied by electric space heaters, wood or coal stoves, or devices such as heat pumps. A double-envelope house is partly a house within a house. At least half of the combined area of the roof and north wall is constructed of two envelopes with a continuous air space at least 6 inches thick between them. Examples of houses are given.

Number of Pages: 200
Cost: $12.00

Title: **UNDERGROUND DESIGNS**
Source: Brick House Publishing Co.
34 Essex St.
Andover, MA 01810
Date: 1981
Author: Wells, Malcolm

Description:
Plans for homes, businesses, offices, institutions and public works with information on site selection, structural, design, water-proofing and insulations, landscaping, and dealing with building codes and zoning regulations.

Number of Pages: 100
Cost: $7.95

Title: **THE DOUBLE SHELL SOLAR HOUSE**
Source: Community Builders
RFD #1 Shaker Road
Canterbury, NH 03224
Author: Booth, Don

Description:
This book is based on the experience of numerous designers, builders and owners of energy saving envelope houses. Text and photos provide substantive design, construction and performance data as well as case histories from several owner-builders.

Number of Pages: 120
Cost: $15.00

Title: **SOLAR ENERGY EDUCATION BY EXAMPLE**
Source: Community and Junior College Journal
Vol. 48, 3; Pages 38-41
November 1977
Date: 1977

Description:
This article describes the solar energy system and its costs, which heats the new north campus of the Community College of Denver.

Title: **CLIMATIC DESIGN FOR HOME BUILDING**
Source: Donald Watson
P.O. Box 401
Guilford, CT 06437
Author: Watson, Donald and Labs, Kenneth

Description:
This book provides design techniques to make homes comfortable with less energy. It contains climatic data for 20 climatically representative cities in six general climatic regions identified for the U.S. For each city, the relative importance and effectiveness of nine climatic design principles, or objectives are indicated. These objectives are: (1) to minimize conductive heat flow (winter); (2) to promote solar gain (winter); (3) to minimize external air flow (winter); (4) minimize infiltration (winter); (5) delay periodic heat flow (winter & summer); (6) minimize solar gain (summer); (7) promote ventilation (summer), etc. Descriptions include solar walls & windows, thermal envelope, etc.

Cost: $10 + $1.50 postage/handling

Title: **AN ATTACHED SOLAR GREENHOUSE**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1976
Author: Yanda, W.F. and Susan

Description:
The designs in this well-illustrated manual can be owner-built for under $2.50 per square foot. Most of the needed materials can be purchases at a local building supply store. Written in both English and Spanish.

Number of Pages: 20
Cost: $2.00

Title: **AT HOME WITH ALTERNATIVE ENERGY: A COMPREHENSIVE GUIDE TO CREATING YOUR OWN SYSTEMS**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1980
Author: Hackleman, Michael

Description:
Looks at the five major alternative energy sources, Sun, Wind, Water, Wood, and Methane, and the sytems which can be built to utilize them. Author's aim is to make his readers feel comfortable with the reasoning involved in creating any system and determine which factors are essential to a system and which are a matter of choice. Well illustrated.

Number of Pages: 146
Cost: $8.95

Title: **BREAD BOX WATER HEATER PLANS**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1975
Author: Baer, Steven

Description:
Principles, design and construction of a simple and effective hot water heater which uses the storage tank as the collector. The design requires opening and closing door manually, but the system is reliable and effective.

Number of Pages: 2-24'x36" blueprints
Cost: $6.00

Title: **BUILD IT YOURSELF NATURAL ENERGY SOURCES: SOLAR, WIND AND WATER POWER MADE EASY**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Pierson, Richard

Description:
Covers wind power basic design, muscle power design and instrumentation design for all electric systems. Provides complete building instructors for a vertical-shaft turbine windmill, a water wheel power plant, a bicycle power exerciser generator unit, a home size mirror-steam powerplant as well as maintenance instrucitons for all these projects.

Number of Pages: 268
Cost: $3.95

Title: **BUILD YOUR OWN SOLAR WATER HEATER**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Campbell, Stu

Description:
Here is the book on solar water heating, covering the pros and cons of the several types - all fully tested and with cost evaluations and manufacturer listings.

Number of Pages: 109
Cost: $7.95

Title: **BUILDING A SOLAR WATER HEATER: A DO IT YOURSELF MANUAL WITH BLUEPRINTS**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Valdez, Arnie and Kawanabe, Akira

Description:
This handbook was designed and written by practical folks who saw a need to define in general a variety of solar heating systems. It includes step by step plans for building a thermosiphon water heater. Designed for workshop use, includes blueprints.

Number of Pages: 42, 2 blueprints
Cost: $7.50

Title: THE COMPLETE BOOK OF HEATING WITH WOOD
Source: EARS
Box 545
La Veta, CO 81055
Date: 1974
Author: Gay, Larry

Description:
Considerable information on finding and preparing wood for burning. Numerous types of wood stoves are explained in detail including tile and soapstone stoves. Also, much on ventilation and humidity, wasted energy and heat exchangers.

Number of Pages: 128
Cost: $3.95

Title: THE COMPLETE BOOK OF INSULATING
Source: EARS
Box 545
La Veta, CO 81055
Date: 1980
Author: Gay, Larry

Description:
A clear, concise explanation of degree-days, R-value, the thermal shell of a house, specific performance rates of various types of insulation, how to figure total cost. The book details the best ways to handle weatherstripping and caulking, to prevent heat loss from windows, how to insulate water tanks, pipes and dustwork. Codes, laws, standards in the industry and tax credits are explained.

Number of Pages: 178
Cost: $7.95

Title: DESIGN FOR A LIMITED PLANET
Source: EARS
Box 545
La Veta, CO 81055
Date: 1976
Author: Skurka, Norma and Naar, Jon

Description:
This beautifully illustrated book centers around the people and the solar houses that they have designed and/or built. Book includes eight pages of full color photographs of solar houses, dozens of black and white photos and diagrams, a list of organization and groups to contact for further information, a product service list, a glossary, and a bibliography.

Number of Pages: 216
Cost: $6.95

Title: HANDMADE HOT WATER SYSTEMS
Source: EARS
P.O. Box 545
La Veta, CO 81055
Date: 1978
Author: Sussman, Art and Frazier, Richard

Description:
This book shows and tells how to enjoy free, totally self-sufficient hot water independent of gas and electricity for the rest of your life with devices that you can build and install yourself.

Number of Pages: 91
Cost: $4.95

Title: HOW TO BUILD A SUPERINSULATED HOUSE: COLD WEATHER EDITION
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Project 2020

Description:
Conventional and non-conventional methods for insulating houses in very cold climates. Well illustrated and explained techniques for reducing heat loss. Discusses framing, materials, infiltration, mass and economics.

Number of Pages: 38
Cost: $3.00

Title: REGIONAL GUIDELINES FOR BUILDING PASSIVE ENERGY CONSERVING HOMES
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978

Description:
Looks at 13 different climatic regions of the country, describes the climatic conditions, looks at the climate's assets and liabilities and gives design recommenations. Many sketches and drawings illustrate numerous design features which work with the climate.

Number of Pages: 312
Cost: $7.00

Title: **A SOLAR GREENHOUSE GUIDE FOR THE PACIFIC NORTHWEST**
Source: Ecotope Group
2332 E. Madison
Seattle, WA 98112
Date: 1979
Author: Magee, Tim et al

Description:
Step-by-step, how to build an attached solar greenhouse, specifically designed for the Maritime Northwest climate; information on design, materials and construction.

Cost: $5.00

Title: **HOW TO SAVE ENERGY WHEN YOU DESIGN OR BUILD A NEW HOME**
Source: Edison Electric Institute
1111 Nineteenth, N.W.
Washington, DC 20036

Description:
This booklet covers design guidelines for the structural envelope - roof, walls, floors, living spaces, as well as recommendations for some of the mechanical systems such as air conditioner, heating plant, water heater, etc.

Number of Pages: 18
Cost: Free

Title: **BUILD A SOLAR MODEL FOR THE CLASSROOM WARM-AIR SYSTEM**
Source: Energy Education Project, Center for Vocational, Technical & Adult Education
University of Wisconsin,
Menomonie, WI 54751
Date: 1978
Author: Perry, Sherry and Smalley, Johnne

Description:
This kit is designed as a solar primer. It covers the basic principles of solar heating and provides the information necessary to build a warm air solar heating system.

Number of Pages: 71
Cost: Contact Sources

Title: **PASSIVE SOLAR HOMES**
Source: Everest House Publishers
33 West 60 Street
New York, NY 10023
Date: 1982
Author: U.S. Dept. of Housing & Urban Development, U.S.D.O.E.

Description:
This heavily illustrated, oversized book of plans and drawings is addressed to the homeowner intrigued by the potential for fuel saving and who wants to study examples of award-winning solar homes. These homes have been or are being built in various sections of the country and are part of HUD's residential solar demonstration program.

Number of Pages: 284
Cost: $12.95

Title: **SOLAR WATER AND POOL HEATING INSTALLATION AND OPERATION**
Source: Florida Solar Energy Center
300 State Road 401
Cape Canaveral, FL 32920
Date: 1979

Description:
This well-illustrated manual is a practical guide for those who are involved in installing and operating solar pool and hot water heaters. Gives all the basic information, including technical aspects of the field.

Number of Pages: 4 pg. brochure
Cost: Free

Title: PRESENT VALUE: CONSTRUCTING A SUSTAINABLE FUTURE
Source: Friends of the Earth
124 Spear Street
San Francisco, CA 94015
Date: 1980
Author: Coe, Gigi

Description:
This book describes examples of renewable energy projects in California. The book has three parts. The first describes active and passive solar retrofits, utilizing the technology for preheating water for dairy farm use to warm cows' teats and sterilize the stainless steel holding tank for the milk, which results in savings on annual fuel bills. The second part of the book "shows how these basic concepts can be integrated and used in different structure." Part three describes ways to build "self-reliant communities."

Cost: $5.95

Title: AT HOME IN THE SUN: AN OPEN-HOUSE TOUR OF SOLAR HOMES IN THE U.S.
Source: Garden Way Publishing
Charlotte, VT 05445
Date: 1979
Author: Davis, Norah and Lindsey, Linda

Description:
This book discusses 31 solar homes and the families who live in them. The families tell what they like about their houses and what they would change; the decisions that have paid off and the errors they've made.

Number of Pages: 236
Cost: $9.95

Title: BUILD YOUR OWN LOW-COST LOG HOME
Source: Garden Way Publishing Co.
Charlotte, VT 05445
Date: 1979
Author: Hard, Roger

Description:
This first book that explains not only how to build a log home using your own logs, but also shows the details on kit log homes and how to construct them. Includes how to shape logs, make corner joints, erect walls, fit joists, add decks and porches, select a site, and the secrets of saving the most when building a log home. Written by an experienced builder and engineer.

Number of Pages: 200
Cost: $8.95

Title: DESIGNING & BUILDING A SOLAR HOUSE
Source: Garden Way Publishing Co.
Charlotte, VT 05445
Date: 1977
Author: Watson, Donald

Description:
A practical "how-to" book that clearly demonstrates the most sensible ways to marry good house design with contemporary solar heating technology. Includes both active and passive solar heat systems, built-in solar units, checklist of equipment, and a comprehensive source list of products and materials.

Number of Pages: 288
Cost: $10.95

Title: GREEN LUMBER CONSTRUCTION
Source: Garden Way Publishing Co.
Charlotte, VT 05445
Date: 1981
Author: Seddon, Leigh

Description:
How to build with rough-cut, full dimension native lumber, to lower drastically the materials cost for attractive homes, barns and sheds.

Number of Pages: 176
Cost: $8.95

Title: **HARNESSING THE WIND FOR HOME ENERGY**
Source: Garden Way Publishing Co.
Charlotte, VT 05445
Date: 1978
Author: McGuigan, Dermot

Decription:
Measuring potential electrical power, selecting a system, in-depth cost analyses; possible energy independence.

Number of Pages: 144
Cost: $5.95

Title: **HOME WIND POWER**
Source: Garden Way Publishing Co.
Charlotte, VT 05445
Date: 1981
Author: U.S. Dept. of Energy

Description:
Offers every aspect of small-scale wind power, including site evaluation and selection, installation, monitoring, and maintenance of wind systems.

Number of Pages: 208
Cost: $10.95

Title: **LOW-COST POLE BUILDING**
Source: Garden Way Publishing Co.
Charlotte, VT 05445
Date: 1980
Author: Wolfe, Peter

Description:
An authoritative "how-to" book. Build a vacation cottage, cabin, year-round home, barns and other outbuildings. Includes photos, illustrations, and plans. Involves limited grading, no excavation for a foundation, use of sites unsuited for other types of buildings, good wind resistance, and fewer materials.

Number of Pages: 176
Cost: $10.95

Title: **THE UNDERGROUND HOUSE BOOK**
Source: Garden Way Publishers
Charlotte, VT 05445
Date: 1980
Author: Campbell, Stu

Description:
Everything needed to consider the underground home, including facts on financing, earth stresses, lighting and humidity control, building codes/zoning, aesthetic consideration, site planning, maintenance costs, and case histories.

Number of Pages: 208
Cost: $10.95

Title: **A PLANNERS HANDBOOK ON ENERGY**
Source: Governor's Energy Office
The Capitol
Tallahassee, FL 32301

Description:
This publication gives information related to energy consumption in residential buildings. Dealing with house design, site selection, materials, construction techniques and selection of appliances and systems, this unit includes tables and charts relating to energy consumption.

Number of Pages: 270
Cost: Contact Source

Title: **ARCHITECTURE: DESIGN, ENGINEERING, DRAWING**
Source: McKnight Publishing Co.
808 IAA Drive
Bloomington, IL 61701
Date: 1979
Author: Spence, William P.

Description:
This text includes information on residential and small commercial building planning and design, electrical and mechanical systems, and structural considerations. It presents basic concepts of solar heating and cooling.

Number of Pages: 581
Cost: $14.97, plus trans.

Title: APPLIED SOLAR ENERGY - A GUIDE TO THE DESIGN, INSTALLATION AND MAINTENANCE OF HEATING AND HOT WATER SERVICES
Source: John Wiley & Sons, Inc.
P.O. Box 063
Somerset, NJ 08873
Date: 1979
Author: Kut, David and Hare, Gerald

Description:
Facts on selecting, assembling, maintaining and repairing installations and components. Hot water supply, space heating, and swimming pool applications are featured. All information based on data gained from actual performance of installations and from user reactions. Details on energy conservation, system payback, and codes of practice.

Number of Pages: 149
Cost: $20.95

Title: CHEM 1 SUPPLEMENT: SOLAR ENERGY
Source: Journal of Chemical Education
Vol. 56, N. 4; Pages 264-66
April 1977
Date: 1979

Description:
This article presents information on the use of solar energy for heating and cooling.

Title: FROM THE WALLS IN
Source: Little, Brown, and Co.
34 Beacon St.
Boston, MA 02114
Date: 1979
Author: Wing, Charles

Description:
Detailed manual on do-it-yourself home remodeling with energy conservation in mind; text and illustrations are both clear and entertaining.

Cost: $9.95

Title: SOLAR ENERGY: THE STATE OF THE ART, PART 2
Source: Man/Society/Technology
Vol. 36, No. 7; pages 214-217
April 1977
Date: 1977
Author: Miller, Charles D.; Pinelli, Thomas E.

Description:
The article discusses implications for industrial arts in the areas of solar thermal collectors, solar thermal electric power conversion, photovoltaic power conversion, and wind energy conversion.

Title: ASHRAE STANDARD 90-75
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
Author: Catalog No. 616

Description:
The purpose of this standard is to provide design requirements which will improve utilization of energy in new buildings. It is stocked by MCSC as a companion item to the afore mentioned manuals.

Cost: $3.90

Title: HEATING WITH WOOD
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1979

Description:
This offers much of the technical and general information about the factors that contribute to efficient or inefficient use of wood for heating. Included is an in-depth discussion of various wood burning appliances and stove/chimney selection/installation.

Cost: Script/Text - Cat. #604 - $3.00
Slide Presentation - Cat. #605
No text included - $75.00

Title: **IES RP-15 RECOMMENDED LEVELS OF ILLUMINATION**
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1977
Author: Catalog No. 617

Description:
This consolidated tabulation of illumination levels was meant as an aid for those familiar withthe explanations in the Handbook and does require considerable knowledge or incorporation into a more complete educaitonal program to yield correct, economical and energy efficient lighting design criteria utilization.

Cost: $4.00

Title: **NEW AND RETROFITTED FACILITIES FOR ENERGY CONSERVATION**
Source: National Center for Research in Vocational Education, The Ohio State Univer.
1960 Kenny Road
Columbus, OH 43210
Date: 1979
Author: Kowle, Carol P.

Description:
This paper discusses recent legislation, energy management in the schools and innovative means of conserving energy.

Number of Pages: 13
Cost: $1.75

Title: **BUILD YOUR OWN ENERGY SAVER HOME OR UPGRADE YOUR EXISTING HOME**
Source: Pioneer Energy Products
3065 Cranberry Highway
Onset, MA 02558
Author: Wilson, Roy L.

Description:
Written in non-technical language, this text emphasizes proper insulating techniques and methods of eliminating air infiltration and heat loss through the structural elements of a house. Examples of the efficiencies achieved by builders in California, Arkansas, Texas and Ohio are given.

Cost: $6.95 + $1 postage/handling

Title: **A MAJOR STEP FOR SOLAR HEATING**
Source: Planning for Higher Education
Vol. 4, No. 4; Pages 27-28
August 1975
Date: 1975
Author: Kula, Robert

Description:
At the time this article was written, a community college in Denver, Colorado was soon to have the nation's largest solar-energy heated installation.

Source: Portland General Electric, Consumer Energy Information
121 S.W. Salmon Street
Portland, OR 97204

Description:
"How to Insulate Unfinished and Finished Attics"
"How to Insulate the Heated or Unheated Garage"
"How to Insulate the Exterior and Interior of Flat Roofs"
"How to Insulate Concrete Walls"
"How to Wrap Ductwork"
"How to Ventilate and Control Home Humidity"
"How to Select and Hang a Metal Stormdoor"
"How to Get the Most from Your Electric Heat System"
"How to Build Large Storm Door for Sliding Glass Doors"
"How to Install Weatherproof Thresholds"
"How to Stop Drafts Under Doors"
"How to Caulk and Weatherstrip"
"How to Weatherstrip Windows"
"How to Make Your Own Inexpensive Metal-Framed Storm Windows"
"How to Double-Glaze or Make Storm Windows for Irregular Shaped Windows"
"Insulate Your Home"

Cost: Free

Note: This list shows what brochures are readily available for people (educators) in our Service Area. There are other packets of informatino available in the Renewable Resources area. There are also films, videotapes available for specific areas of Conservation & Energy. Available upon request.

Title: SOLAR ENERGY HANDBOOK
Source: Power Systems Group/Ametek Inc.
Chilton Book Co.
Radnor, PA 19087
Date: 1979

Description:
Book explains movement of the sun so one will know how to collect the energy available. Book details collector types and efficiencies. Other techniques included are how to distribute the energy you've collected, collector and storage sizing techniques and methods of estimating long-term cost and payback. Also describes the good as well as bad points of the systems it covers.

Cost: Contact Source

Title: RADICAL TECHNOLOGY
Date: 1976
Author: Boyle, Godfrey and Harper, Peter; Editors

Description:
A thought-provoking collection of original articles concerning the reorganization of technology along more humane and ecologically sound lines. Seven sections are in the book: Food, Energy, Shelter, Autonomy, Materials, Communication, Other Perspectives. Also included is a comprehensive directory of the literature and active organizations in Radical Technology. A large section is devoted to agricultural practices. Of interest to Home Economics is the article on textiles, "Man Maketh the Clothes," which describes various sources and characteristics of fibres, then procedes to describe the process of turning fibres into cloth.

Number of Pages: 304

Title: YOUR GUIDE TO GOOD SHELTER: HOW TO PLAN, BUILD, OR CONVERT FOR ENERGY CONSERVATION
Source: Reston Publishing Co., Inc., A Prentice-Hall Co.
Reston, VA 22090
Author: Waschek, Carmen and Brownlee

Description:
This book shows you how to plan a home that meets your family's needs, employs an energy-efficient design including solar energy, and incorporates security, health, and safety features.

Number of Pages: 237
Cost: $12.95

Title PASSIVE DESIGN: IT'S A NATURAL
Source: Solar Energy Research Institute
1617 Cole Boulevard
Golden, CO 80401
Date: 1980
Author: Passive Technology Program of the SERI

Description:
An excellent "basic information" book on aspects of passive solar design and the principles of passive heating. A good introduction to passive heating.

Number of Pages: 21
Cost: Free

Title: LOW-COST, ENERGY-EFFICIENT SHELTER FOR THE OWNER AND BUILDER
Source: Rodale Press, Inc.
33 East Minor Street
Emmaus, PA 18049
Date: 1976
Author: Eccli, Eugene

Description:
This self-teaching book brings together the information and design principles needed in order to build sensibly, incorporating energy conservation measures, while maintaining an affordable price.

Number of Pages: 408
Cost: $5.95

Title: WINTERING WITH SOLAR: ONE SCHOOL'S RESPONSE TO SCARCE ENERGY
Source: Science Teacher
Vol. 45, No. 4, Pages 23-24
April 1978
Date: 1978
Author: Shore, Ron

Description:
This article describes how students evaluated the thermal performance of existing campus structures and made suggestions for improvements in thermal efficiency as a part of a course in energy conservation and domestic solar energy technology. In addition, the students also designed, built and operated a solar greenhouse.

Title: **HEATING AND AIR CONDITIONING SYSTEMS INSTALLATION STANDARDS FOR 1 & 2 FAMILY DWELLINGS AND MULTIFAMILY HOUSING INCLUDING SOLAR**
Source: Sheet Metal and Air Conditioning Contractor's National Association, Inc.
8224 Old Courthouse Road
Tyson's Corner
Vienna, VA 22180
Date: 1977

Description:
This publication provides an installation standard for winter and/or summer air conditioning systems and related systems incorporating the latest accepted practices, including solar, and is based upon recognized research data compiled by numerous agencies concerned with the science of air conditioning.

Title: **INSTALLATION GUIDELINES FOR SOLAR DHW SYSTEMS IN ONE & TWO-FAMILY DWELLINGS**
Source: Superintendent of Documents
Union Plaza
North Capital & H
Washington, D.C. 20234
Date: 1980
Author: Hollander, Peter, and others

Description:
Described are some of the better techniques for installing solar domestic hot water (DHW) systems. By using thse guidelines, along with the manufacturer's manual, professional installation contractors and skilled homeowners should be able to install and fill a solar DHW system. Among the topics considered are system layouts, siting, mounting procedures, pipes, insulation, heat exchangers, system controls, and safety. The manual also contains maintenance suggestions and an installation checklist.

Cost: $4.00

Title: **THE THERMAL MASS PATTERN BOOK**
Source: Total Environmental Action, Inc.
Harrisville, NH 03450
Date: 1980
Author: Total Environmental Action, Inc.

Description:
This pamphlet provides guidelines for sizing heat storage in passive solar homes. It presents a number of existing rules-of-thumb for sizing thermal mass prepared as architectural patterns. This booklet is designed to help architects, designers, and builders create more efficient passive solar homes.

Number of Pages: 9
Cost: $1.00 ea.
Bulk rates available

Title: **INSULATION**
Source: U.S. Department of Energy
Tehcnical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Date: 1980
Author: Department of Energy

Description:
A comprehensive pamphlet on insulation describes why to insulate, how insulation works. Also included is information to help you determine if your house needs insulation, if you can do it yourself or if you should have it done professionally. Information services are mentioned to give further reference sources.

Number of Pages: 11
Cost: Free

Title: **LOW ENERGY FUTURES FOR THE UNITED STATES**
Source: U.S. Dept. of Energy, Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830

Description:
This document covers a range of available technologies and public policies which could reduce future energy consumption to below current levels. Areas addressed are conservation in buildings, structural changes, appliance and space conditioning; conservation in industry, and conservation in transportation including passenger and freight transportation.

Number of Pages: 125
Cost: Contact Source

Title: SOLAR ENERGY FOR PACIFIC NORTHWEST RESIDENTIAL HEATING
Source: U.S. Department of Energy
1992 Federal Building
915 Second Avenue
Seattle, WA 98174
Author: U.S. Dept. of Energy

Description:
A comprehensive technical guide to heating with solar energy in the Pacific Northwest. Includes a glossary of terms.

Cost: Free - Price may change

Title: ALTERNATIVE NATURAL ENERGY SOURCES IN BUILDING DESIGN
Source: Van Nostrand Reinhold Co.
450 West 33rd St.
New York, NY 10001
Date: 1977
Author: Davis, Albert J. and Schubert, Robert P.

Description:
This book describes alternative solutions and applications for each problem and over 200 diagrams, tables, and formulas are supplied. Summarizes relation of energy to the built environment, regional and site adaption, energy conservation, natural cooling and ventilation, water power, wind power, solar energy, organic fuels and integrated systems.

Number of Pages: 322
Cost: $6.95

Electrical / Electronics

Instructional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: Campbell, E.A. et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 2 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Title: ENERGY AUDITS
Source: Center for Occupational Research and Development
601 Lake Air Drive, Suite C
Waco, TX 76710

Description:
This course provides an overview of the purpose, objectives and mechanics of the energy audit process. Full background and procedural instructions precede case studies and lab practice in auditing. Finally, audit analyses are undertaken, with student recommending remedial actions based on analyses of his/her practice audits.

Cost: $27.50

Title: **ENERGY ACTIVITIES FOR INDUSTRIAL EDUCATION**
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1977
Author: Instructors of Industrial Subjects

Description:
This publication consists of 21 instructional activities related to energy conservation in some industrial subjects. Written by industrial educators, some lessons include: Construction of a Hydroelectric Generator, Insulation Efficiency Test, Solar Water Heating, Compare Power Consumption of Various Electrical Devices, 4 lessons for the automotive class and many others.

Number of Pages: 21 activities
Cost: $1.00

Title: **SOLAR ENERGY - SOLUTION OR PIPEDREAM**
Source: Mississippi Energy Extension Center
P.O. Box 5406
Mississippi State, MS 39762
Date: 1978
Author: Polk, Joyce

Description:
This series of lessons and class activities is designed for presentaiton in a sequence of nine class days. The collection is intended to provide the student in advanced science classes with awareness of the possibilities and limitations of solar energy as a potential solution to the energy crisis. Included are discussion of the following: (1) solar energy variables (weather, geography, and day/night problems); (2) characteristics of solar heating and cooling; (3) construction of a solar collection; (4) electrical production by solar cell; and (5) characteristics of solar electrical production.

Cost: Contact Source

Title: **ENERGY EFFICIENCY FOR ELECTRICAL TECHNOLOGY**
Source: Larry Scharmann, Education Coordinator
Nebraska Energy Office
P.O. Box 95085
Lincoln, NE 68509
Date: 1982
Author: Nebraska Energy Office Sponsored

Description:
This curriculum guide contains five units that were designed to be incorporated into an existing program in electrical technology. The material is primarily intended for use at the postsecondary level, but can be used by a well-equipped secondary instructor. The content of each unit has been written and well organized into an outline format. This course is designed to promote the understanding and application of some important electrical energy conservation practices and to provide the student with sufficient information to expand his/her working knowledge beyond maintenance and operation. The units include: Where to Look for Energy Waste, Conservation Methods for Electrical Consumers, Conservation Methods for Electrical Designers, Conservation Methods for Electrical Contractors, A Look Beyond (explores additional electrical conservation practices).

Number of Pages: 38
Cost: Free

Title: **ENERGY CONSERVATION FOR VOCATIONAL STUDENTS**
Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428
Date: Published in 1981
Author: Developed at Navarro College, Corsicana, Texas

Description:
An 11-module curriculum designed to provide practical applications of energy conservation for both secondary and postsecondary vocational programs, and for adult/continuing education. Includes training in identifying, monitoring, managing, and curbing energy usage. Modules can be used as independent units, collectively as a course of study, or as an integral part of a conventional vocational course. Relate well with home economics, agriculture, building trades, electronics, air conditioning and refrigeration, automotive, economics, cooperative education, physics, and biology. The flexible format includes text/lecture for the instructor; laboratory projects for students; charts, graphs, tables, and transparency masters; pre- and posttests; and a vast bibliography.

Number of Pages: 1,275
Cost: $30.00

Electrical / Electronics

Technical Materials

Title: **DIRECT USE OF THE SUN'S ENERGY**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Daniels

Description:
An excellent book on solar energy which describes how to use sun power to cook with, how to store it, heat with it, run engines on it, and more.

Number of Pages: 271
Cost: $2.50

Title: **WIND AND WINDSPINNERS**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Hackleman and House

Description:
One of the best books available on the basics of wind-to-electrics energy conversion. Explains the how-to's of building an efficient, low-cost Savonius rotor windplant.

Number of Pages: 140
Cost: $10.00

Food Services

Instructional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: Campbell, E.A. et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Title: ENERGY CONSERVATION IN FOOD SERVICE: COURSE OUTLINE AND INSTRUCTIONAL MATERIALS
Source: Program Development Section,
North Carolina Dept. of Community Colleges
Raleigh, NC 27611

Description:
This unit is a complete program for community college food service students who will become employees. Assignments and tests are included.

Number of Pages: 122
Cost: Contact Source

Title: FEED, NEED, CREED
Source: Science for the People
897 Main St.
Cambridge, MA 02139
Date: 1980
Author: Science for the People

Description:
A high school curriculum on food, resources and population. The goal of the curriculum is to raise the awareness of students and teachers regarding the nature of the food system and its relationship to nutrition, population and resources. Much of the information included is not available as part of contemporary curriculum. A very thought provoking program.

Number of Pages: 86
Cost: $5.00, plus 60¢ postage

Food Services

Technical Materials

Title: ENERGY MANAGEMENT PLAN
Source: State of Alabama
Department of Education
State Office Building
Montgomery, AL 36130
Date: 1980
Author: Staff at Dept. of Education

Description:
This document contains the State Department of Education Energy Conservation Plan for conserving energy in their schools. They believe that if these measures are implemented, that energy consumption can be reduced by 20 percent with capital outlay. Most every energy consuming area of a school is addressed. Some areas covered are: Developing an Energy Management Plan for a School System, Conserving Energy, Combustion Tests for Boilers, Heating Equipment, Energy Management for Food Service Personnel, Home Economics, Agribusiness Education, and Energy Conservation in Equipment Management. Many others are addressed. Also included is a bibliography.

Number of Pages: 54
Cost: Free

Title: ENERGY AND ORDER
Source: EARS
Box 545
La Veta, CO 81055
Date: 1976
Author: Terry, Mark and Witt, Paul

Description:
This teacher's handbook outlines a series of presentations and activities for a complete unit on energy. Some areas touched are how energy works, how it is connected to food, to transportation, to the world we live in. Experiments are included. Some activities are a look at family utility bills, determining energy consumption of appliances, and how much that McDonald's hamburger really costs - and who pays for it.

Number of Pages: 42
Cost: $3.00

Forestry

Technical Materials

Title: BIO-ENERGY DIRECTORY (ANNUAL)
Source: Bio-Energy Council
Suite 825 A, 1625 Eye St., N.W.
Washington, DC 20006
Date: 1979*, 1980*, 1981
Author: Bente, Paul F., Jr., Editor

Description:
These directory volumes contain one-page summaries of 1850 projects in 63 countries concerned with biomass generated energy. Hundreds of projects deal specifically with alcohol; reports are divided into sections based on technology involved. (Each volume reports only new information). * Schools requesting special discount on official letterhead stationery may purchase 1979 and 1980 volumes, postpaid, for $10.00 each, while supply lasts.

Number of Pages: 534, 766, 1201
Cost: $40.00*, $70.00*, $90.00

Health

Instructional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: E.A. Campbell, et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Home Econnomics
Instructional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: Campbell, E.A. et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational educaiton curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Title: SAVE ENERGY & HAVE FUN WITH TEXTILES
Source: American Textile Manufacturers Institute
Charlotte, North Carolina

Description:
A booklet with energy conserving tips related to the use of textiles. Illustrated with humorous drawings, it is filled with energy-saving ideas for the home. Practical steps students of all ages can take to save energy are covered in depth; staying warm when it's cold, and cool when it's hot; energy-efficient washing of clothes, home furnishings, and people; how to stop drafts; the best clothing for the season and more. Includes many projects ideal for classroom activities.

Number of Pages: 40
Cost: 1 copy free, $35/100

Title: ENERGY CONSERVATION EDUCATION AND THE COMMUNITY COLLEGE
Source: Community and Junior College Journal
Vol. 48, 3 Pages 16-9
November 1977
Date: 1977
Author: Myran, Gunder A.

Description:
This article describes a regional program for educating the public about energy conservation and for solving community energy problems.

Title: ENERGY CONSERVATION EDUCATION: AN ACTION APPROACH
Source: Council on the Environment of New York
51 Chambers Street, Room 228
New York, NY 10007
Date: 1977
Author: Zamm, Michael and Samuel, Barry

Description:
This is a curriculum unit consisting of 13 lessons, which include six easily replicable worksheets, and two wall charts. Activities on home and school conservation of electricity and included with topics on types and sources of energy; the importance of conservation and energy conservation in the home, school and neighborhood. Included are enrichment lessons featuring lab experiments, biographies in energy, energy-related careers, reading and language arts exercises.

Number of Pages: 72
Cost: $2.00

Title: **PROJECT RETRO-TECH: TEACHER'S KIT FOR COURSE ON HOME WINTERIZATION**
Source: Federal Energy Administration
Region I
150 Causeway St.
Boston, MA 02114
Date: 1975
Author: Hill, Richard C.; and others

Description:
This kit contains materials for an eight hour course on home weatherization. This course is designed for: (1) work-crew supervisors; (2) secondary or post secondary vocational-technical students; and (3) adults wishing to improve their vocational-technical skills. Contained in this kit are: (1) a teacher's guide; (2) charts for an overhead projector; (3) a student manual; and (4) a home winterization job book. These materials promote the use of existing technology for home retrofitting. Lesson plans are provided in the teacher's guide. The job book is similar to an energy audit workbook. The student manual explains the how and why of winter comfort heating relative to this course.

Cost: Contact Source

Title: **ENERGY CONSERVATION EDUCATION CLASSROOM ACTIVITIES FOR HOME ECONOMICS TEACHERS - GRADES 7-12**
Source: Energy and Man's Environment
4980 W. Amelia Earhart Dr.
Salt Lake City, Utah 84116, or
Ray Thiess
Oregon Department of Education
(Oregon EME)
Date: 1979
Author: Oregon EME and Colorado Energy/Home Economics Steering Committee

Description:
An instructional guide for Home Economics teachers to use to integrate energy conservation into the existing curriculum. Covers these areas: Foods, Nutrition, Textiles, Clothing, Housing & Home Furnishings, Child Development, Personal, Family Relations.

Title: **INTEGRATING VOLUNTARY SIMPLICITY OF LIFESTYLE INTO HOME ECONOMICS**
Source: Florida Department of Education
Division of Vocational Education
Dissemination and Diffusion Section
Knott Bldg.
Tallahassee, FL 32301
Date: 1981
Author: Pestle, Ruth E. and Assistants

Description:
This instructional program has as its focus the concept of Voluntary Simplicity which recognizes that the world has some real and serious problems with energy shortages. It acknowledges that Voluntary Simplicity is a lifestyle which incompasses environmental awareness, recycling of goods and materials, conservation of resources and sharing of goods and services. Addresses all aspects of life.

Number of Pages: 340
Cost: $8.60

Title: **HOUSEHOLD ENERGY**
Source: Ginn and Company
P.O. Box 573
Lexington, MA 02173
Date: 1976

Description:
A booklet whose activities focus on various aspects of energy use in the home including energy costs, using energy, household appliances, cutting energy costs, and using solar energy at home. The teacher's edition gives a program overview, a listing of the materials and equipment required for each activity, background information, evaluation suggestions and applicable references.

Number of Pages: Teacher's Ed. - 90
Student Ed. - 75
Cost: Teacher's $5.95
Students - $3.75

Title: LOW ENERGY TECHNOLOGY - A UNIT OF INSTRUCTION IN HOUSING AND HOME ENVIRONMENT ATTITUDES
Source: Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Beaulieu, Barbara & Associates

Description:
This unit of instruction deals with attitudes, habits and behaviors. Included are four student performance objectives: To identify possessions and activities that are important to the individual; to identify behaviors and activities that they are willing to change to set new priorities to better manage and conserve energy, etc. It is recommended that the teacher integrate these activities into the existing curriculum rather than to teach the lessons in sequence. This is a complete teaching package complete with student handouts, transparency masters and evaluation instruments.

Number of Pages: 29
Cost: Free, price may change

Title: LOW ENERGY TECHNOLOGY—A UNIT OF INSTRUCTION IN HOUSING AND HOME ENVIRONMENT ELECTRICAL ENERGY USAGE
Source: Instructional Materials Service
101 Rolf Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Beaulieu, Barbara; Becker, Wm.; Wood, Kathleen

Description:
Since energy costs continue to rise consumers are faced with difficult decisions regarding their personal consumption of energy and the impact the energy problem will have on their lives. As electricity costs increase, consumers will need to understand their electrical bill,how it is calculated and where the electricity is being used. Understanding how various appliances use electricity will enable a consumer to more effectively purchase appliances and use them more efficiently. This unit of instruction guides the student through a variety of activities related to electrical energy usage. A complete teaching package.

Number of Pages: 38

Title: LOW ENERGY TECHNOLOGY - A UNIT OF INSTRUCTION IN HOUSING AND HOME ENVIRONMENT LIGHTING
Source: Instructional Materials Service
101 Rolf Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Beaulieu, Barbara; Becker, Wm.; Plowman, Faye

Description:
Recognizing that electric bills reflect the increased costs of energy, this instructional package devotes itself to informing the student through a variety of activities that intelligent lighting is one way to conserve energy and reduce the size of the electric bill.

Number of Pages: 25
Cost: Free

Title: LOW ENERGY TECHNOLOGY - A UNIT OF INSTRUCTION IN HOUSING AND HOME ENVIRONMENT HOME ENERGY USAGE AND CONSERVATION
Source: Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Beaulieu, Barbara & Associates

Description:
Based upon the fact that the consumer can directly affect their own cost of energy in the home, becoming aware of the ways in which energy at home is used and establishing patterns of consumption, alternatives can be considered that will reduce wasteful energy habits and in the long run, save both fuel and money. These lessons direct the students to become aware of these patterns.

Number of Pages: 28
Cost: Free

Title: **LOW ENERGY TECHNOLOGY - HOUSING AND HOME ENVIRONMENT - INSULATION**
Source: Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Beaulieu, Barbara; Becker, William; Plowman, Faye

Description:
This unit was designed for use with students in Home Economics to enrich their knowledge of the use and purpose of insulation. Very easy to follow lesson plans, with student handouts comprise the package.

Number of Pages: 21
Cost: Free

Title: **LOW ENERGY TECHNOLOGY - A UNIT OF INSTRUCTION IN HOUSING AND HOME ENVIRONMENT - SINGLE FAMILY HOMES - MULTI-FAMILY HOMES - MOBILE HOMES**
Source: Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Beaulieu, Barbara; Becker, Wm.; Plowman, Faye

Description:
Since energy considerations will play a greater role in expenditures for family housing, potential home-owners and renters must be able to recognize and select the various energy efficient options that will be compatible to their desired lifestyles. This instructional unit is divided into 3 modules; Single Family Homes; Multi-Family Homes and Mobile Homes. Included in this unit are student performance objectives, content information, teaching-learning activities, student handouts, transparency masters and evaluation instruments.

Number of Pages: 28
Cost: Free, but price may change

Title: **ENERGY CONSERVATION**
Source: Mississippi Energy Extension Center
P.O. Box 5406
Mississippi State, MS 39762
Date: 1978
Author: Land, Amy A.

Description:
This selection of class activities involves a sequence of 10 class sessions. The goal of the collection is to aid students in learning the concepts of energy conservation and to put this knowledge into practice. Attention is also given to the development of alternate energy sources. Eachlesson includes an activity title, motivational hints, lesson purpose, materials needed, and instructions to students. A list of free and inexpensive resource materials and sources of them is provided at the end of the document.

Cost: Contact Source

Title: **ENERGY AWARENESS CURRICULUM, 1980**
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This curriculum guide contains course content for a series of "mini-courses" that can be presented in an adult continuing education program in area technical-vocational schools and community colleges. The program consists of nine modules, each divided into units and including learning objectives and student handouts. The modules cover the following areas: (1) awareness of the energy dilemma—an introduction and prerequisite for the other courses; (2) surveying energy usage—a brief assessment of the energy used in the United States by the various energy-user categories; (3) utility bills and economics of energy conservation—a discussion of energy pricing, the development of power utility rate structure, and natural gas rate fluctuations; (4) how to search for energy conservation opportunities—a presentation of opportunities for the individual and the community to save and to conserve energy in the automobile, the home, and the use of appliances; (5) lighting conservation opportunities—lighting for energy conservation; (6) hot water heating conservation opportunities—techniques for selecting, installing, and operating the domestic hot water heater; (7) appliance energy conservation opportunities—techniques for purchasing, operating, and maintaining appliances; (8) building construction versus energy consumption—factors involved in building an energy-efficient home; (9) heating, ventilating, and air conditioning conservation—principles of heating and cooling buildings. Lists of printed and audiovisual resources are included.

Cost: Contact Source

Title: **ENERGY CONSERVATION FOR VOCATIONAL STUDENTS: SECONDARY**
Source: Navarro College
P.O. Box 1170
Corsicana, TX 75110
Date: 1981
Author: Green, C. Paul; Orsak, Charles

Description:
This curriculum consists of 11 modules designed to equip students with the ability to identify, monitor, manage, and curb energy usage in their daily lives. There is also a comprehensive bibliography of various supplemental materials. Included with the modules are pretests and posttests, and lists of terms, as well as reproducible charts and graphs. Included in the modules are these topics: (1) awareness of the energy dilemma, (2) energy usage, (3) understanding appliances, (5) energy consumption related to building construction, (6) energy and human comfort, (7) heating, ventilating, and air conditioning conservation and (8) the economics of energy conservation.

Cost: $25 (includes postage)

Title: **ENERGY CONSERVATION FOR VOCATIONAL STUDENTS**
Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428
Date: Published in 1981
Author: Developed at Navarro College, Corsicana, Texas

Description:
An 11-module curriculum designed to provide practical applications of energy conservation for both secondary and postsecondary vocational programs, and for adult/continuing education. Includes training in identifying, monitoring, managing, and curbing energy usage. Modules can be used as independent units, collectively as a course of study, or as an integral part of a conventional vocational course. Relate well with home economics, agriculture, building trades, electronics, air conditioning and refrigeration, automotive, economics, cooperative education, physics, and biology. The flexible format includes text/lecture for the instructor; laboratory projects for students; charts, graphs, tables, and transparency masters; pre- and posttests; and a vast bibliography.

Number of Pages: 1,275
Cost: $30.00

Title: **ENERGY CONSERVATION CURRICULUM FOR SECONDARY AND POST-SECONDARY STUDENTS MODULE 2: SURVEYING ENERGY USAGE**

Source: Occupational Curriculum Center
East Texas State University
Commerce, TX 75428

Date: 1979

Description:

This module is the second in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself, to be integrated with the other ten modules into a program on energy conservation, or to be integrated into conventional vocational courses as a unit of instruction. The objective of this module is to train secondary and postsecondary students to recognize energy needs, energy consumption patterns, and conservation measures in several areas of use. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following four units: (1) residential/commercial energy use and conservation; (2) industrial energy use and conservation; (3) agricultural energy use and conservation; and (4) transportation energy use and conservation. The information in each unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Cost: Sold as a set

Title: **ENERGY CONSERVATION CURRICULUM FOR SECONDARY AND POST-SECONDARY STUDENTS MODULE 3: UNDERSTANDING UTILITY BILLS**

Date: 1979

Description:

This module is the third in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or as part of a sequence of four modules on understanding utilities (see also modules 5-7). The objective of this module is to introduce the student to utility bills used for residential and commercial customers. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following five units: (1) electric meters; (2) electric rates (3) the electric bill; (4) gas meters and gas rates; and (5) the gas bill. The information in each unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Cost: Sold as a set

Title: ENERGY CONSERVATION CURRICULUM FOR SECONDARY AND POST-SECONDARY STUDENTS MODULE 4: HOW TO SEARCH FOR ENERGY CONSERVATION

Date: 1979

Description:

This module is the fourth in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself, or as a prerequisite to all or any of the modules in this series. The objective of this module is to train secondary and postsecondary students in the recognition of energy users in the home and the implementation of energy conservation measures to manage energy consumption and energy efficiency. The text emphasizes the importance of recognizing energy users in the home and developing a conscious awareness of energy efficiency and energy management. It discusses the techniques of looking for energy conservation opportunities in the home and preparing checklists for monitoring these opportunities. The information is prsented in lecture format accompanied by checklists and illustrations. A bibliography and several handouts supplementing the text material are found at the end of the module.

Cost: Sold as a set

Title: ENERGY CONSERVATION FOR SECONDARY AND POST-SECONDARY STUDENTS MODULE 5: LIGHTING CONSERVATION OPPORTUNITIES

Date: 1979

Description:

This module is the fifth in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or part of a sequence of four modules on understanding utilities (see also modules 3, 6, and 7). The objective of this module is tot rain students to recognize energy-related factors in lighting, including differences in light bulbs and fixtures. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following three units: (1) lighting efficiency; (2) estimating lighting requirements; and (3) tips for better lighting efficiency. The information ine ach unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Cost: Sold as a set

Title: ENERGY CONSERVATION CURRICULUM FOR SECONDARY AND POST-SECONDARY STUDENTS MODULE 6: HOT WATER HEATING CONSERVATION OPPORTUNITIES

Date: 1979

Description:

This module is the sixth in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or as part of a sequence of four modules on understanding utilities (see also modules 3,5, and 7). The objective of this module is to train students in the recognition, implementation, and utilization of energy consumption and possible conservation in residential hot water heating and domestic hot water use. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following three units: (1) domestic hot water use; (2) water conservation; and (3) consider solar water heating. The information in each unit is presented in lecture format accompanied by laboratory exercises and questions/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Cost: Sold as a set

Title: **ENERGY CONSERVATION CURRICULUM FOR SECONDARY AND POST-SECONDARY STUDENTS MODULE 7: APPLIANCE ENERGY CONSERVATION OPPORTUNITIES**
Date: 1979

Description:
This module is the seventh in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself or as part of a sequence of four modules on understanding utilities (see modules 3, 5, and 6). The objective of this module is to train students in the recognition, implementation, and utilization of energy consumption and possible opportunities for conservation in the use of residential and small commercial appliances. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following two units: (1) appliance energy use, and (2) appliance labeling program. The information in each unit is presented in lecture format accompanied by laboratory exercises and question/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Cost: Sold as a set

Title: **CALCULATE TO SAVE**
Source: Odin Press (Publisher)
P.O. Box 536
New York, NY 10021
Author: Stiles, Tom

Description:
A book written for consumers which explains how to use a calculator, the world of percents, money and finance and how to reduce electric bills, the basics of electricity, savings through the use of solar energy, etc. Also included are two programmed learning sections: lessons on percent, and unit pricing.

Number of Pages: 204
Cost: $2.95

Title: **PROVIDING FOR ENERGY EFFICIENCY IN HOMES AND SMALL BUILDINGS**
Source: Office of Consumer Affairs
Education Division
Washington, DC 20585
Date: 1980

Description:
This is a five-booklet instructional package available in single copies from the U.S. DOE. A very comprehensive program, it is complete with a teacher's guide and student workbook.

Cost: Free

Title: **ENERGY MANAGEMENT STRATEGIES FOR COLORADO HOME ECONOMICS TEACHERS**
Source: Public Service Co. of Colorado
550 15th St., Rm 484
Denver, CO 80202
Date: Available 9-28
Author: Home Ec teachers

Description:
This guide is divided into five categories: Food and Nutrition, Clothing and Textiles, Housing and Home Furnishings, Child Development, and Personal and Family Relations.

Number of Pages: 192
Cost: $10 each
25 or more - $7.50 ea.

Title: **AN EDUCATOR'S GUIDE TO THE THREE Es: ENERGY/ECOLOGY/ECONOMICS**
Source: Sears, Rosebuck and Co.
Consumer Information Services
D/703 Sears Tower, Chicago, IL
60684
Date: 1980

Description:
This is a teacher's resource guide which introduces concepts on energy, ecology, and economics providing the teacher with background information, instructional objects, key concepts, a pretest, interdisciplinary learning activities, and sources for additional information.

Number of Pages: 24
Cost: $1.00

Title: **FEED, NEED, CREED**
Source: Science for the People
897 Main St.
Cambridge, MA 02139
Date: 1980
Author: Science for the People

Description:
A high school curriculum on food, resources and population. The goal of the curriculum is to raise the awareness of students and teachers regarding the nature of the food system and its relationship to nutrition, population and resources. Much of the information included is not available as part of contemporary curriculum. A very thought provoking program.

Number of Pages: 86
Cost: $5.00, plus 60¢ postage

Title: **ENERGY CHOICES FOR CONSUMERS**
Source: Science Teacher
Vol. 44, No. 9; Pages 32-33
December 1977
Date: 1977
Author: Nolan, William T.

Description:
This article consists of sample problems concerning energy consumption and conservation with air conditioners, electric ranges, refrigerators and televisions. Also discussed is the energy efficiency ratio.

Title: **ENVIRONMENTAL EDUCATION ACTIVITIES**
Source: Social Science Record
Vol. 12, No. 2, Pages 28-33
Winter 1975
Date: 1979
Author: Lelah, Joey J.

Description:
This article presents 13 multidisciplinary teaching techniques which center on the environment, particularly on energy conservation, involving concepts such as stewardship, scarcity, planning, valuing, survival and interdependence.

Home Economics

Technical Materials

Title: ENERGY MANAGEMENT PLAN
Source: State of Alabama
Department of Education
State Office Building
Montgomery, AL 36130
Date: 1980
Author: Staff at Dept. of Education

Description:
This document contains the State Department of Education Energy Conservation Plan for conserving energy in their schools. They believe that if these measures are implemented, that energy consumption can be reduced by 20 percent with capital outlay. Most every energy consuming area of a school is addressed. Some areas covered are: Developing an Energy Management Plan for a School System, Conserving Energy, Combustion Tests for Boilers, Heating Equipment, Energy Management for Food Service Personnel, Home Economics, Agribusiness Education, and Energy Conservation in Equipment Management. Many others are addressed. Also included is a bibliography.

Number of Pages: 54
Cost: Free

Title: SO EASY ENERGY PACKET
Source: Arizona Energy Office, A Division of the Office of Economic Planning & Development
1700 W. Washington, Room 504
Phoenix, AZ 85007

Description:
This packet consisting of five individual pamphlets on energy conservation in the home includes practical ways to resolve energy waste through home planning, renovation or maintenance.

Cost: Free

Title: THE FUEL SAVERS
Source; Brick House Publishing Co., Inc.
Jack Howell, Publisher
3 Andover, MA 01810
Date: 1978
Author: Scully, Dan; Prowler, Don; Anderson, Bruce

Description:
Describes various energy savings items as insulating curtains, window boxes, solar water heaters, etc. giving the advantages and disadvantages of each. Write for a catalog of their other books.

Number of Pages: 61
Cost: $2.75, plus $1 postage

Title: A PROMISING MARRIAGE
Source: Community and Junior College Journal
Vol. 48, 3; Pages 10-4
November 1977
Date: 1977
Author: Carsey, J.N.

Description:
This article reviews recent developments and suggests methods that community colleges can utilize to meet the needs of the energy research and development administration by designing training programs for technicians in the environmental area, as well as developing programs designed to foster citizen awareness.

Title: THE COMPLETE BOOK OF HEATING WITH WOOD
Source: EARS
Box 545
La Veta, CO 81055
Date: 1974
Author: Gay, Larry

Description:
Considerable information on finding and preparing wood for burning. Numerous types of wood stoves are explained in detail including tile and soapstone stoves. Also, much on ventilation and humidity, wasted energy and heat exchangers.

Number of Pages: 128
Cost: $3.95

Title: A COOKBOOK FOR BUILDING A SOLAR FOOD DRYER
Source: EARS
Box 545
La Veta, CO 81055
Date: 1977
Author: Valdez, Arnold and Marie

Description:
Complete plans for building and using a six-shelf solar food dryer.

Number of Pages: 18
Cost: $4.00

Title: THERMAL SHUTTERS AND SHADES
Source: EARS
Box 545
La Veta, CO 81055
Date: 1980
Author: Shurcliff, William

Description:
Most of the heat loss in any home or apartment is through the windows. There are many ways to prevent this heat loss through thermal shutters and shades. Emphasis is on simple, low cost schemes, both homemade and commercially available, with over 230 devices examined for efficiency and cost-effectiveness.

Number of Pages: 256
Cost: $12.95

Title: ENERGY SAVING WINDOW TREATMENTS
Source: Departmentof Design and Environmental Analysis
Cornell University
Martha Van Renssalaer Hall
Ithaca, NY 14853

Description:
A description of various window treatments that can be used to help reduce the heat loss from windows in a home.

Number of Pages: 9
Cost: Free

Title: TIPS FOR ENERGY SAVERS
Source: DOE/Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Date: 1979
Author: U.S. Dept. of Energy

Description:
This booklet presents hundreds of practical suggestions for conserving and using energy more effectively. **Negatives are lent without charge to organizations which plant to reprint quantities of TIPS. For a set of negatives contact: Division of Editorial Services, Office of Public Affairs, Dept. of Energy, Washington, D.C. 29585

Number of Pages: 32
Cost: Free single copy

Title: KILOWAT COUNTER
Source: EARS
Box 545
La Veta, CO 81055
Date: 1975
Author: Friend, Gil and Morris, David

Description:
A consumer's guide to energy concepts, quantities and uses. Includes calculations of energy consumption, definitions, charts, diagrams, tables, plus problems and answers to test your energy knowledge. Especially suited for instruction dealing with buying habits, energy consumption and environmental responsibility.

Number of Pages: 36
Cost: $2.00

Title: THE SOLAR COOKERY BOOK
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Halacy, Beth and Dan

Description:
The first book written on how to harness the sun's energy in preparing food. Includes complete instructions and plans for building an inexpensive solar oven and reflector cooker, comprhensive recipe section, tried and tested on the solar cookers.

Number of Pages: 108
Cost: $7.95

Title: HOW TO SAVE ENERGY WHEN YOU USE OR BUY MAJOR APPLIANCES
Source: Edison Electric Institute
1111 19th Street, N.W.
Washington, DC 20036

Description:
The intent of this booklet is to publicize appliance energy efficiencies and thus, to encourage the selection of more efficient appliances for the home. It describes various household appliances, describes the Energyguide test procedure and lists some better use habits recommended by National Energy Watch for each appliance.

Number of Pages: 22
Cost: Free

Title: HOW TO SAVE ENERGY WITH BETTER USE HABITS
Source: Edison Electric Institute
1111 Nineteenth Street, NW
Washington, DC 20036

Description:
This booklet outlines opportunities for energy conservation in seven major areas around the home including heating, cooling, water heating, foodkeeping, mealtime, laundering, lighting and lifestyle.

Number of Pages: 18
Cost: Free

Title: 104 WAYS TO CONTROL ELECTRIC BILL
Source: Edison Electric Institute
Educational Services
1111 19th St. N.W.
Washington, DC 20036
Author: Rudloff, Paula - U.S. Dept. of Energy

Description:
A pamphlet giving tips for conservation of energy in the home to reduce energy costs.

Cost: A sample copy is available free.

Title: AT HOME IN THE SUN: AN OPEN-HOUSE TOUR OF SOLAR HOMES IN THE U.S.
Source: Garden Way Publishing
Charlotte, VT 05445
Date: 1979
Author: Davis, Norah and Lindsey, Linda

Description:
This book discusses 31 solar homes and the families who live in them. The families tell what they like about their houses and what they would change; the decisions that have paid off and the errors they've made.

Number of Pages: 236
Cost: $9.95

Title: WOOD HEAT SAFETY
Source: Garden Way Publishing Co.
Charlotte, VT 05445
Author: Shelton, Jay W.

Description:
Topics include how to use wood and other solid fuels safely for heating safe operation and maintenance of systems, wood stove installation, central heating with wood, flues and safety.

Number of Pages: 196
Cost: $9.95

Title: **A PLANNERS HANDBOOK ON ENERGY**
Source: Governor's Energy Office
The Capitol
Tallahassee, FL 32301

Description:
This publication gives information related to energy consumption in residential buildings. Dealing with house design, site selection, materials, construction techniques and selection of appliances and systems, this unit includes tables and charts relating to energy consumption.

Number of Pages: 270
Cost: Contact Source

Title: **HOME ENERGY HOW-TO**
Source: Harper and Row, Publishers
10 East 53rd St.
New York, NY 10022
Date: 1977
Author: Hand, A.J.

Description:
This publication deals with ways to conserve energy and ways to harness the energies of sun, wind, water, biofuels, and wood.

Number of Pages: 258
Cost: $9.95

Title: **ENERGY CONSERVATION: FAMILY VALUES, HOUSEHOLD PRACTICES AND CONTEXTUAL VARIABLES**
Source: Home Economics Research Journal
Vol. 7, No. 4, Pages 210-218
March 1979
Date: 1979
Author: Hogan, M. Janice; Paolucci, Beatrice

Description:
This article describes a study that was done to determine if differences existed in household energy conservation practices in families with varying husband-wife commitment to values. A predictor of energy conservation behavior was found to be the value of eco-consciousness.

Title: **DEVELOPING CREATIVITY IN RECYCLING CLOTHING**
Source: Illinois Teacher of Home Economics
Vol. #22, Issue 3, Pages 189-192,
1979
Date: 1979
Author: Sohn, Marjorie

Description:
Gives tips for recycling clothing into stylish re-wearable articles.

Title: **TEXTILES AND ENERGY CONSERVATION**
Source: Illinois Teacher of Home Economics
January/February 1979
Date: 1979

Description:
Addresses the relationship between textiles and energy conservation.

Title: **100 WAYS TO SAVE ENERGY**
Source: Journal of Home Economics
May, 1978, p. 33-36
Date: 1978
Author: Stewart, Marjorie S. and Moss, Willodean D.

Description:
Tips for home energy conservation.

Title: **TEXTILES AND ENERGY**
Source: Journal of Home Economics
May 1978
Date: 1978

Description:
Addresses the subject of the relationship between textiles and energy consumption.

Title: **SAVING ENERGY WITH WHAT YOU WEAR**
Source: North Central Regional Extension Publication #73, Illinois Circular 1168, Office of Agricultural Publications,
University of Illinois at Urbana - Campaign, 123 Mumford Hall, 1301 W. Gregory Drive
Urbana, IL 61801
Date: 1979
Author: Mead, Marjorie

Description:
Gives tips for saving energy costs through the selection and the use of suitable clothing.

Number of Pages: 8
Cost: 60¢

Title: **ENERGY CONSERVATION: TIPS FOR RESIDENTIAL GAS CUSTOMERS**
Source: Northwest Natural Gas Co.
123 NW Flanders St.
Portland, OR 97029

Description:
Tips for saving energy in the home for natural gas users.

Cost: Free. Write for catalog.

Source: Northwest Natural Gas Company
123 NW Flanders
Portland, OR 97209
(503-226-4211)

Description:
Resources about Natural Gas by Topic
LNG Demonstration - Guest speaker demonstrates LNG
Natural Gas at Mist, OR - Video tape and speaker
Geothermal Exploration and Projects - Video tape and speaker
Weatherization - Speakers
Weatherization/Solar - Speakers
Cooking with Gas - Speaker
Natural Gas Distribution Job - Speakers
Natural Gas Customer Service Jobs
Energy Going to Market - Film - 10 minutes
Careers in a Large Industry - Film - 10 minutes
Gas Energy for America - Film - 25 minutes
The Energy Picture - ¾" Video tape - 14 minutes
What Do You Do at the Gas Company? - ¾" Video tape

Title: **DIRECT USE OF THE SUN'S ENERGY**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Daniels

Description:
An excellent book on solar energy which describes how to use sunpower to cook with, how to store it, heat with it, run engines on it, and more.

Number of Pages: 271
Cost: $2.50

Title: **44 WAYS TO BUILD ENERGY CONSERVATION INTO YOUR HOME**
Source: Owens-Corning Fiberglas Corp.
Fiberglas Tower
Toledo, Ohio 43659
Author: Meeks, B.Q.

Description:
A pamphlet of energy conserving tips for the home.

Cost: Contact Source

Title: **MAKING THE MOST OF YOUR ENERGY DOLLARS IN HOME HEATING AND COOLING**
Source: Owens-Corning Fiberglas Corp.
Fiberglas Tower
Toledo, Ohio 43659

Description:
Conservation techniques for saving energy dollars are included in this pamphlet.

Number of Pages: 16
Cost: Free

Title: **KNOWING YOUR HOME APPLIANCE**
Source: Porcelain Enamel Institute
1911 N. Ft. Myer Drive
Arlington, VA 22209

Description:
Familiarizes the consumer with the various home appliances.

Cost: Contact Source

Source: Portland General Electric, Consumer Energy Information
121 SW Salmon Street
Portland, OR 97204

Description:
"How to Insulate Unfinished and Finished Attics"
"How to Insulate the Heated or Unheated Garage"
"How to Insulate the Exterior and Interior of Flat Roofs"
"How to Insulate Concrete Walls"
"How to Wrap Ductwork"
"How to Ventilate and Control Home Humidity"
"How to Select and Hang a Metal Stormdoor"
"How to Get the Most from Your Electric Heat System"
"How to Build Large Storm Door for Sliding Glass Doors"
"How to Install Weatherproof Thresholds"
"How to Stop Drafts Under Doors"
"How to Caulk and Weatherstrip"
"How to Weatherstrip Windows"
"How to Make Your Own Inexpensive Metal-Framed Storm Windows"
"How to Double-Glaze or Make Storm Windows for Irregular Shaped Windows"
"Insulate Your Home"

Cost: Free

Title: **RADICAL TECHNOLOGY**
Date: 1976
Author: Boyle, Godfrey and Harper, Peter - Editors

Description:
A thought-provoking collection of original articles concerning the reorganization of technology along more humane and ecologically sound lines. Seven sections are in the book: Food, Energy, Shelter, Autonomy, Materials, Communication, Other Perspectives. Also included is a comprehensive directory of the literature and active organizations in Radical Technology. A large section is devoted to agricultural practices. Of interest to Home Economics is the article on textiles, "Man Maketh the Clothes," which describes various sources and characteristics of fibres, then procedes to describe the process of turning fibres into cloth.

Number of Pages: 304
Cost: Contact Source

Title: **SOLAR PROJECTS: WORKING SOLAR DEVICES TO CUT OUT AND ASSEMBLE**
Source: Running Press
125 South Twenty-Second St.
Philadelphia, PA 19103
Date: 1981
Author: Garrison, A. Joseph

Description:
Fully illustrated book offering ten models, from a solar hot dog cooker to solar ovens and sundials, that anyone can build using the instructions from this book. Help explain the concept of solar power.

Number of Pages: 122
Cost: $7.95 (Price is subject to change)

Title: **IN THE BANK. . .OR UP THE CHIMNEY? A DOLLARS AND CENTS GUIDE TO ENERGY-SAVING HOME IMPROVEMENTS, 2ND EDITION**
Source: Superintendent of Documents, U.S. Government Printing Office
North Capital & H
Washington, D.C. 20402
Date: 1977

Description:
This guide includes energy-saving techniques applicable to all types of housing.

Number of Pages: 73
Cost: $2.00

Title: WATER CONSERVATION CHECKLIST FOR THE HOME. SAVE WATER, SAVE ENERGY, SAVE MONEY
Source: Superintendent of Documents
North Capital & H
Washington, D.C. 20402
Date: 1977
Author: Pifer, Glenda; and others

Description:
Few people realize that the average person uses about 60 gallons of water each day. Water shortages are already occurring on a regional scale; someday they may become a national problem. Accordingly, this checklist is designed to help house and apartment dwellers determine how efficiently they use water and identify additional ways to save it. Presented are over 60 suggestions for conserving water in such household activities as personal care, laundry, outdoor work, food preparation, and cleaning.

Number of Pages: 7
Cost: $1.75

Title: PROVIDING FOR ENERGY EFFICIENCY IN HOMES AND SMALL BUSINESS
Source: U.S. Department of Energy, Office of Consumer Affairs
Education Division
Washington, DC 20585

Description:
A technically up-to-date and quite complete guide.

Cost: Contact Source

Industrial Arts

Instuctional Materials

Title: ENERGY ACTIVITIES FOR INDUSTRIAL EDUCATION
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1977

Description:
Specifically aimed for industrial arts programs, 21 "hands-on" activities/experiments include constructing hydroelectric and wind generators, insulation efficiency tests, solar collection and storage, and automotive efficiency. Grades 7-12.

Number of Pages: 42
Cost: $1.00

Title: **ENERGY AND POWER TECHNOLOGY - CURRICULUM GUIDE**
Source: North Dakota Vocational Curriculum Library
Bismarck Junior College
Schafer Heights
Bismarck, ND 58501
Date: 1977

Description:
One of a set of six guides for an industrial arts curriculum at the junior school level, this guide provides the basic foundation to develop a one-semester course based on the cluster concept, energy and power technology. The guide suggests manipulative and experimental student-conducted activities or teacher demonstrations which focus on the socioeconomic and environmental impact of energy in the energy/power (e/p) field. Following an introduction covering rationale, cluster outline and objectives, and cluster taxonomic structure, seven units are presented: introductory concepts, safety concepts, energy forms and sources, energy harnessing systems and Newton's laws, e/p transmission and control, e/p utilizaiton, and e/p career opportunities. Each unit includes unit objectives, student competencies and related student activities, unit outline, and where applicable, illustrations and information sheets.

Cost: $4.00
$15.00 - set

Title: **INDUSTRIAL ARTS CURRICULM GUIDE - LEVEL I FOR N.D. SECONDARY SCHOOLS USING THE CLUSTER TECHNOLOGIES APPROACH**
Source: North Dakota Vocational Curriculum Library
Bismarck Junior College
Schafer Heights
Bismarck, ND 58501
(PH: 701-224-5487)
Date: 1977
Author: Bender, Myron

Description:
This guide was developed as part of a curriculum research project designed to improve the teaching/learning process for industrial arts education in North Dakota secondary schools and to restructure subject matter into the cluster areas for efficient teaching and delivery. The guide is intended to assist industrial arts teachers in developing planned programs and courses (at the junior high school or level one phase of industrial arts) that reflect concepts related to industry and technology. It outlines the rationale and objectives for the program, content, student competencies to be developed, student learning activities, and instructional resources for each of five cluster areas. The five cluster areas included are insights into industry and technology, graphic communication, manufacturing, construction, and energy and power. Samples are included of the units and of student competencies and activity sheets in outline form listing the rationale, unit objectives, cluster area knowledge structure, and instructional resources needed to teach the unit. The appendix contains materials used in conducting the curriculum guide rewriting project.

Cost: Contact Source

Title: **IOWA INDUSTRIAL ARTS HANDBOOK FOR INTRODUCTORY LEVEL - ENERGY AND POWER**
Source: Information and Publications
Department of Public Instruction
Grimes State Office Building
Des Moines, IA 50319
Date: 1978
Author: Industrial Arts Curriculum Project Committee

Description:
This instructional unit is composed of thirty individualized learning activity packets (LAPS) geared at the junior high school level. Included are a student pre and post test for each lesson, and a teacher's guide consisting of unit competencies, answer keys, resource materials and references.

Cost: $8.00

Title: **SOLAR CONCEPTS**
Source; Maine Audubon Society
118 U.S. Route One
Falmouth, ME 04105
Date: 1979
Author: Gorham, Jonathan W.

Description:
This unit consisting of 12 chapters which examine renewable energy sources, the principals of heat transfer, hot water systems, and active and passive solar designs for homes is designed to provide vocational students with the technical skills required to design and install solar systems. The teacher's guide includes learning objectives and a brief bibliography for each chapter, pre and post tests, and detailed instructions and plans for construction of six student projects including an altimeter, parabolic concentrator and thermal shutters.

Number of Pages: Teacher's - 135
Student's - 130
Cost: Contact Source

Title: **ENERGY ALTERNATIVES AND THE ROLE OF INDUSTRIAL ARTS**
Source: Man/Society/Technology
Vol. 37, No. 2; Pages 22-26
November 1977
Date: 1977
Author: Owens, Frank C. and Pinelli, Thomas E.

Description:
This article reviews the energy crisis, discusses energy conservation and suggests methods for integrating aspects of energy education into the industrial arts curriculum. Briefly discussed are consumer and occupational aspects of energy.

Title: **ENERGY EDUCATION: TEACHING FOR THE FUTURE**
Source: Man/Society/Technology
Vol. 37, No. 8, Pages 6-9
May-June 1978
Date: 1978
Author: Gierke, C. David

Description:
This article outlines the energy technology curriculm at a senior high school in New York. The author states that industrial arts is best prepared to institute energy education.

Title: **ENVIRONMENTAL EDUCATION FOR INDUSTRIAL ARTS STUDENTS**
Source: Man/Society/Technology
Vol. 39, No. 4; Pages 20-23
January 1980
Date: 1980
Author: Grant, Arthur E., Jr.

Description:
This article describes school projects related to environmental education, industrial pollution, and reference materials available in the area of environmental education as they are related to industrial arts.

Title: **INDUSTRIAL ARTS EDUCATORS ARE THE BASE FOR ALL TECHNOLOGICAL CHANGE**
Source: Man/Society/Technology Journal
Vol. 38, N. 7; Pages 26-28
April 1979
Date: 1979
Author: O'Bannon, James E.

Description:
The article stresses that existing curricula must be modified to incorporate current energy technology in the industrial arts classes. It suggests that industrial educators are to provide the training and technical assistance required to cope with the needs created by the energy dilemma.

Title: **ENERGY ACTIVITIES FOR INDUSTRIAL EDUCATION**
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1977
Author: Instructors of Industrial Subjects

Description:
This publication consists of 21 instructional activities related to energy conservation in some industrial subjects. Written by industrial educators, some lessons include: Construction of a Hydroelectric Generator, Insulation Efficiency Test, Solar Water Heating, Compare Power Consumption of Various Electrical Devices, 4 lessons for the automotive class and many others.

Number of Pages: 21 activities
Cost: $1.00

Title: **CURRICULUM GUIDE FOR INDUSTRIAL ARTS EDUCATION: ENERGY & POWER**
Source: Missouri State Dept. of Elementary and Secondary Education
Instructional Materials Lab, 10 Industrial Education Building
University of Missouri, Columbia, Missouri 65201

Description:
This curriculum guide consists of a master teaching plan for four levels, equipment list, activities, bibliography and transparency masters. Both traditional and alternative sources of energy production and uses are explored.

Cost: Contact Source

Title: **PENNSYLVANIA'S ENERGY CURRICULUM FOR THE SECONDARY GRADES: INDUSTRIAL ARTS**
Source: Pennsylvania State Governor's Energy Council, Harrisburg, PA
Date: 1981
Author: Wighaman, Paul F. and Zimmerman, Earl R.

Description:
This guide is a compilation of 23 previously published documents for industrial arts teachers who want to incorporate energy education into their curriculum. Some of the projects described include fireplaces, solar water heaters and solar ovens. Also discussed is the place of energy in the industrial arts curriculum.

Cost: Contact EDRS

Title: **SOLAR ENERGY EDUCATION: INDUSTRIAL ARTS**
Source: Solar Energy Project
New York State Education Department
Albany, NY 12234

Description:
This booklet of 10 activities, designed for use by students, explores passive heating-cooling, collectors, wind turbine and other applications.

Cost: Contact Source

Title: **INTRODUCTION TO ENERGY - INSTRUCTIONAL MODULES AND TRANSPARENCY MASTERS**
Source: Wisconsin Vocational Studies Center
1025 W. Johnson St.
Madison, Wisconsin 53706
Date: 1978
Author: Posthuma, Fred and Stephey, Merle

Description:
This energy module is intended for an introductory course on energy for secondary school classes. It consists of behavioral objectives, general background, vocabulary, lesson outlines, coordinated activities, and an annotated bibliography of resources. It is intended to provide a fundamental guide for the establishment of the teacher's own energy curriculum. Because the module is intended to include a shop or lab component, the first two lessons deal with a preliminary introduction and safety.

Cost: $6.50

Industrial Arts
Technical Materials

Title: AT HOME WITH ALTERNATIVE ENERGY: A COMPREHENSIVE GUIDE TO CREATING YOUR OWN SYSTEMS
Source: EARS
Box 545
La Veta, CO 81055
Date: 1980
Author: Hackleman, Michael

Description:
Looks at the five major alternative energy sources, Sun, Wind, Water, Wood, and Methane, and the systems which can be built to utilize them. Author's aim is to make his readers feel comfortable with the reasoning involved in creating any system and determine which factors are essential to a system and which are a matter of choice. Well illustrated.

Number of Pages: 146
Cost: $8.95

Title: BUILD YOUR OWN SOLAR WATER HEATER
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Campbell, Stu

Description:
This book on solar water heating covers the pros and cons of the several types - all fully tested and with cost evaluations and manufacturer listings.

Number of Pages: 109
Cost: $7.95

Title: BUILDING A SOLAR WATER HEATER: A DO IT YOURSELF MANUAL WITH BLUEPRINTS
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Valdez, Arnie and Kawanabe, Akira

Description:
This handbook was designed and written by practical folks who saw a need to define in general a variety of solar heating systems. It includes step by step plans for building a thermosiphon water heater. Designed for workshop use, includes blueprints.

Number of Pages: 42, 2 blueprints
Cost: $7.50

Title: A COOKBOOK FOR BUILDING A SOLAR FOOD DRYER
Source: EARS
Box 545
La Veta, CO 81055
Date: 1977
Author: Valdez, Arnold and Marie

Description:
Complete plans for building and using a six-shelf solar food dryer.

Number of Pages: 18
Cost: $4.00

Source: Portland General Electric, Consumer Energy Information
121 SW Salmon Street
Portland, Or 97204

Description:
"How to Insulate Unfinished and Finished Attics"
"How to Insulate the Heated or Unheated Garage"
"How to Insulate the Exterior and Interior of Flat Roofs"
"How to Insulate Concrete Walls"
"How to Wrap Ductwork"
"How to Ventilate and Control Home Humidity"
"How to Select and Hang a Metal Stormdoor"
"How to Get the Most from Your Electric Heat System"
"How to Build Large Storm Door for Sliding Glass Doors"
"How to Install Weatherproof Thresholds"
"How to Stop Drafts Under Doors"
"How to Caulk and Weatherstrip"
"How to Weatherstrip Windows"
"How to Make Your Own Inexpensive Metal-Framed Storm Windows"
"How to Double-Glaze or Make Storm Windows for Irregular Shaped Windows"
"Insulate Your Home"

Cost: Free

Title: **SOLAR PROJECTS: WORKING SOLAR DEVICES TO CUT OUT AND ASSEMBLE**
Source: Running Press
125 South Twenty-Second St.
Philadelphia, PA 19103
Date: © 1981
Author: Garrison, A. Joseph

Description:
Fully illustrated book offering ten modules, from a solar hot dog cooker to solar ovens and sundials, that anyone can build using the instructions from this book. Help explain the concept of solar power.

Number of Pages: 122
Cost: $7.95 (Price is subject to change)

Marketing

Instructional Materials

Title: **AN EDUCATOR'S GUIDE TO THE THREE Es: ENERGY/ECOLOGY/ECONOMICS**
Source: Sears, Roebuck and Co.
Consumer Information Services
D/703 Sears Tower, Chicago, IL 60684
Date; 1980

Description:
This is a teacher's resource guide which introduces concepts on energy, ecology, and economics providing the teacher with background information, instructional objects, key concepts, a pretest, interdisciplinary learning activities, and sources for additional information.

Number of Pages: 24
Cost: $1.00

Title: **ENERGY IN THE GLOBAL MARKETPLACE GRADES 9, 10, 11**
Source: U.S. Department of Energy,
Technical Information Office
P.O. Box 62
Oak Ridge, TN 37830
Date: 1978
Author: Fowler, John M.; Kryger, King C.; and Carey, Helen H.

Description:
This instructional unit examines the effect of energy supply and demand on prices, and competition among nations as demand outsteps supply.

Number of Pages: 58
Cost: Contact Source

Title: **ENERGY COST REDUCTION FOR RETAIL STORES**
Source: American Retail Federation
1616 H Street, NW
Washington, DC 20006

Description:
An energy cost reduction guidebook for the retail industry.

Cost: $2.50

Title: **ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE**
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: Campbell, E. A. et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Trades and Industrial Mechanics

Instructional Materials

Title: ENERGY AWARENESS AND CONSERVATION: YOU MAKE THE DIFFERENCE
Source: AAVIM
120 Driftmier Engineering Center
Athens, GA 30602
Date: 1982
Author: Campbell, E.A. et al

Description:
This series of 27 instructional modules is designed to infuse concepts of energy efficiency and conservation into the regular vocational education curriculum. In addition to 22 occupation-specific modules, the series includes two introductory, motivational modules, a Learning Activity Package (on conducting an energy survey), and two resource booklets containing conservation activities suitable for high school and community college student organizations.

Number of Pages: 860
Cost: Set of 27 - $35.14
Individual modules available - write for brochure.

Title: DEVELOPMENT OF AN ENERGY TECHNICIAN OPTION WITHIN THE ELECTRO-MECHANICAL-TECHNOLOGY PROGRAM OFFERED AT ALLEGANY COMMUNITY COLLEGE, CUMBERLAND, MO, FINAL REPORT
Source: Allegany Community College
Cumberland, MD 21502
Date: 1979

Description:
This final report includes 2 catalogs of performance objectives for courses in thermodynamics for technicians and refrigeration, heating ventilation and air conditioning systems.

Number of Pages: 249
Cost: Contact Source

Title: MEETING THE ENERGY NEEDS—SOLAR TECHNICIAN TRAINING PROGRAMS
Source: American Technical Education Association, Inc. Journal
Vol. 7, N. 5, Pages 11-12
March-April 1980
Date: 1980
Author: Panitz, Theodore

Description:
This article differentiates between solar technicians and energy technicians. It points out that, because of the energy crisis, there has been a great deal of activity in the solar energy field, with the result that the field could become saturated with solar technicians. This article describes a program to train energy technicians that was developed at Cape Cod Community College.

Title: ENERGY PRODUCTION SYSTEMS
Source: Center for Occupational Research and Development
601 Lake Air Drive, Suite C
Waco, TX 76710

Description:
This program is an in-depth technical study of processes and equipment used to convert energy resources (such as geothermal and the sun) and fuels (such as coal and natural gas) into useful energy forms, such as electricity,heat and motion or light.

Cost: $17.50

Title: FUNDAMENTALS OF ENERGY TECHNOLOGY
Source: Center for Occupational Research and Development
601 Lake Air Drive, Suite C
Waco, TX 76710

Description:
This program is designed to give the student an overview of the field of energy conservation and use and to provide descriptions of job functions typical to energy technicians. The course material is organized to show the compatability of the total curriculum and the purpose of the approach chosen.

Cost: $17.50

Title: **WIND MACHINES**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1976
Author: Edridge, Frank for the Nat'l Science Found.

Description:
An overview on wind machines, it describes the viability, history, taxonomy, future potential, applications, siting, performance and system design of wind machines. Includes hundreds of photos, illustrations and book diagrams.

Number of Pages: 78
Cost: $3.00

Title: **TECHNICAL EDUCATION TO MEET NEW DEMANDS IN ENERGY**
Source: Engineering Education
Vol. 69, No. 8; Pages 798-802
May 1979
Date: 1979
Author: Hull, Daniel M.

Description:
This article is a description of a curriculum research and development project which is intended to develop and test a curriculum for training energy conservation and use technicians.

Title: **A DEVELOPMENT REPORT FOR ENRGY TECHNICIAN OPTION IN MECHANICAL ENGINEERING TECHNOLOGY**
Source: James F. Hassinger and Dr. Michael H. Parsons
Hagerstown Junior College, 751 Robinwood Drive
Hagerstown, MD 21740
Date: 1979

Description:
This report discusses the status of a project to develop an energy technician option for the mechanical engineering technology program at Hagerstown Junior College.

Cost: Contact Source

Title: **THE EFFECTS OF THE ENERGY SITUATION ON INDUSTRIAL EDUCATION**
Source; Industrial Education
Vol. 67, No. 4; Pages 18, 21-2
April 1978
Date: 1978
Author: Tangman, Edward P.

Description:
The article gives approaches for educators in the industrial field to use in helping to resolve energy conservation problems including: (1) curriculum development in all grades, (2) staff development, (3) learning activities, and (4) operations facilities. Several sources of information on energy education and information are given.

Title: **SOLAR CURRICULUM GUIDES, 1980**
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This document contains an outline for a curriculum to train solar energy technicians in community colleges. The guide contains eight courses, each of which is divided into one to five modules. Modules, in turn, are divided into units, and units contain student handouts appropriate to the material. The following eight courses are included in this curriculum guide: (1) solar applications and future technology; (courses 2 and 3 missing); (4) introduction to solar energy, with modules on the sun and radiation, solar energy collection, solar energy storage, solar systems, and future outlook for solar; (5) control theory and application, with a module on general control; (6) materials and fabrication, with modules on basic materials, fabricaiton, and air distribution; (7) collectors and energy storage, with modules on collectors, solar storage, and installation; and (8) solar heating and cooling systems, with modules on system designs, retrofitting, and servicing. Prerequisites for persons entering the solar energy technician curriculum and a list of resources are included.

Cost: Contact Source

Title: **SOLAR TECHNOLOGY CURRICLUM, 1980**
Source: Kansas State Dept. of Education
Division of Vocational Education
Topeka, Kansas 66612
Date: 1980

Description:
This curriculum guide contains lecture outlines and handouts for training solar technicians in the installation, maintenance, and repair of solar energy hot water and space heating systems. The curriculum consists of four modular units developed to provide a model through which community colleges and area vocational/technical schools can respond to training requirements and manpower needs as the market for solar systems progresses. The four units can serve as an extension of an existing occupational program or as a short-term intensive training program for individuals engaged in the heating and intensive training program for individuals engaged in the heating and air conditioning industry. The four units include solar radiation and introduction to solar technology, solar construction techniques and materials, solar domestic hot water systems, and solar space heating systems. Each unit consists of performance objectives, presentation, training aids, and references; and some units contain learning activities. Twenty handouts for students cover the following topics: the Earth's orbit, solar energy, heat transfer, Kansas laws concerning energy conservation and solar energy systems, terminology, basic systems, safety, soldering and brazing, symbols, valves, pumps, availability of solar energy, residential hot water requirements, design calculations, direct heating—thermosiphon system, direct heating—pumped system, indirect heating—pumped system with heat exchanger, active solar heating and cooling, common operating modes, and common problems.

Cost: Contact Source

Title: **SP-12 STUDENT MANUAL - PHASE 1 (SA) - SOLAR APPLICATION**
Source; Lennox Education Products
P.O. Box 400450
Dallas, TX 75240
Author: Lennox

Description:
This up-to-date manual covers solar system application engineering. Objectives of the manual include: understand the concepts of hydronic and air systems for solar space heating, domestic hot water, understand piping arrangements and fluid flow during varying modes of operation, understand electrical control of the solar system, etc.

Cost: Write for price

Title: **SM-50 STUDENT MANUAL - PHASE 1 (SW) - INSTALLATION PROCEDURES FOR SOLAR DOMESTIC HOT WATER HEATING SYSTEMS**
Source: Lennox Education Products
P.O. Box 400450
Dallas, TX 75240
Author: Lennox

Description:
Contents include: The Installation Story, Lennox Solar Domestic Hot Water Literature, Miscellaneous, SMS3 Single Tank Solar System, Overhead Transparencies and Script, Glossary, Evaluation.

Cost: Write for price
Teacher's Guide is free when student manuals are purchased.

Title: **ENERGY SOURCES FOR MANUFACTURING - Item 2824K - FS/Cass Set**
Source: McKnight Publishing Co.
P.O. Box 2854
Bloomington, IL 61701
Date: 1982

Description:
A filmstrip/cassette which looks at the major industrial source - oil and alternative sources, including solar, geothermal, and nuclear.

Cost: $30.00

Title: **PROGRAMMED INSTRUCTION MANUAL FOR A NEW SOLAR AND ENERGY CONSERVATION LABORATORY - FINAL EVALUATION REPORT**
Source: New York State Education Department
Albany, NY
Date: 1978

Description:
A programmed instruction course was developed, consisting of fifteen experiments encompassing eleven separate pieces of equipment operational in a solar and energy conservation lab. The programmed instruction manual for the lab was evaluated and revised during a workshop. This evaluation indicated that both the lab and manuala re valuable tools aiding in efforts to conserve fossil fuels. The manual, which is also provided, consists of nine sections and an appendix. The first two sections contain programmed experiments involving a solar cycle trainer and solar schematic trainer. Section 3 provides power solar trainer instructor and trainee manual materials. Section 4, which deals with a heat pipe, contains general characteristics of the heat pipe, a simplified theoretical analysis, an introduction to a heat pipe mini-lab, and suggested experiments for the mini-lab. Computer programs dealing with the cooling and heating modes of a solar-assisted heat pump and an air-to-air solar trainer are contained in sections 5-7. Section 8, which deals with heat pump technology, contains a review of the simulated system and two practice exercises. Section 9 presents a sample print-out covering a domestic solar hot water heater. An appendix discusses teaching the principles of solar energy in the undergraduate engineering laboratory.

Cost: Contact Source

Title: **ENERGY EDUCATION: TEACHING FOR THE FUTURE**
Source: Man/Society/Technology
Vol. 37, No. 8, Page 6-9
May-June 1978
Date: 1978
Author: Gierke, C. David

Description:
This article outlines the energy technology curriculum at a senior high school in New York. The author states that industrial arts is best prepared to institute energy education.

Title: **ENERGY CONSERVATION FOR VOCATIONAL STUDENTS**
Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428
Date: Published in 1981
Author: Developed at Navarro College, Corsicana, Texas

Description:
An 11-module curriculum designed to provide practical applications of energy conservation for both secondary and postsecondary vocational programs, and for adult/continuing education. Includes training identifying, monitoring, managing, and curbing energy usage. Modules can be used as independent units, collectively as a course of study, or as an integral part of a conventional vocational course. Relate well with home economics, agriculture, building trades, electronics, air conditioning and refrigeration, automotive, economics, cooperative education, physics, and biology. The flexible format includes text/lecture for the instructor; laboratory projects for students; charts, graphs, tables, and transparency masters; pre- and posttests; and a vast bibliography.

Number of Pages: 1,275
Cost: $30.00

Title: **THE GENERAL HEATING MULTI-PROJECT PACK**
Source: Physics Education
Vol. 13, No. 4; Pages 214-216
May 1978
Date: 1978
Author: Cowking, A. and others

Description:
This article describes a multi-project pack on central heating systems, developed into an educational game which allows students to examine the basic decision to install a central heating system for a particular and the economics involved.

Title: **TRAINING COURSES FOR PRACTITIONERS TO DESIGN, INSTALL AND OPERATE SOLAR HEATING AND COOLING SYSTEMS FOR RESIDENTIAL BUILDINGS**
Source: Solar Energy Applications Laboratory
Colorado State University
Fort Collins, CO 80523
Date: 1976
Author: Karaki, S; Ward, D.S.; and Winn, C.B.

Description:
This paper discusses two courses developed at Colorado State University for the purpose of training practitioners in the building industry to design and install solar heating and cooling systems in residential buildings.

Number of Pages: 14

Title: **DEVELOPMENT AND IMPLEMENTATION OF TRAINING CURRICULUM/PROGRAM IN SOLAR AND COOLING AT THE TECHNICIAN LEVEL, FINAL REPORT**
Source: Southern Region Nuclear and Energy Training Center of Texas State Technical Institute
Waco, TX 76705
Date: 1977
Author: Troutman, C. Walter

Description:
Final report of project to develop curricula to support the training of a work force engaged in the installation, maintenance and repair of domestic and commercial solar energy heating and cooling systems.

Number of Pages: 214
Cost: Contact Source

Title: **THE ROLE OF SOLAR TECHNOLOGY PROGRAMS IN MEETING OUR ENERGY NEEDS**
Source: Technical Education News
Vol. 37, No. 2 Pages 8-9
Jan-Feb 1978
Date: 1978
Author; Valentine, Ivan E. and Larson, Milton E.

Description:
This article examines various present and future energy sources, describing the solar energy system. The article stresses the immediate need for training programs for solar energy technicians. This is aimed at the post-secondary institutions.

Title: **INTRODUCTORY HYDRAULICS ACTIVITY MANUAL**
Source; Technical Systems, Inc.
2256 Terminal Road
St. Paul, MN 55113
Date: 1971
Author: Daines, Dr. J.R.

Description:
This manual includes introductory experiments designed to illustrate the fundamental principles of hydraulic circuits, pressure and force, power, pumps, fluid transmission, values, actuators, and fluid storage and conditioning.

Title: **THE ROLEOF SOLAR TECHNOLOGY PROGRAMS IN MEETING OUR ENERGY NEEDS**
Source: Technical Education News
Vol. 37, No. 2 Pages 8-9
Jan-Feb 1978
Date: 1978
Author; Valentine, Ivan E. and Larson, Milton E.

Description:
This article examines various present and future energy sources, describing the solar energy system. The article stresses the immediate need for training programs for solar energy technicians. This is aimed at the post-secondary institutions.

Title: **TECHNICIANS IN THE ENERGY PIPELINE: HOW MANY AND WHAT KIND**
Source: Technical Education News
Vol. 34, No. 3 Pages 2-5
May/June 1975
Date: 1975
Author: Harris, Norman C.

Description:
This article reviews the types of energy, estimates future needs for technicians, and discusses curriculum and training needs.

Title: ELECTRO MECHANICAL CONTROLS ACTIVITY MANUAL
Source: Technical Systems, Inc.
150 West 88th St.
Minneapolis, MN 55420
Date: 1977
Author: Butler, William W.

Description:
Consists of activities which introduce solenoid valves and their electric control circuits, which make use of pressure switches, relays, electric time delays, and photo-electric controls.

Title: HYDRALICS I. ACTIVITY MANUAL
Source: Technical Systems, Inc.
150 West 88th St.
Minneapolis, MN 55420
Date: 1981
Author: Butler, William W.

Description:
This book of exploratory activities will help understand fundamental hydraulic theory and application; explore common hydraulic components and simple circuits, explore transmitting force through liquids, converting force to pressure, and controlling power.

Title: INTRODUCTORY PNEUMATICS ACTIVITY MANUAL
Source: Technical Systems, Inc.
150 West 88th St.
Minneapolis, MN 55420
Date: 1975
Author: Bender, Myron

Description:
Consists of a series of activities designed to illustrate the fundamentals of pneumatics, characteristics and behavior of compressed air, compression of air, transmission and distribution of compressed air, compressed air line filters, controlling and measuring air pressure, fixed pressure and flow control, fundamentals of linear actuators, double-acting pneumatic linear actuators, force pressure and area relationships, cylinder speed control, air control devices, sequencing pneumatic cylinders, air rotary actuators, fundamentals of linear air bearings, and the venturi tube.

Title: HYDRAULICS II & III ACTIVITY MANUAL
Source: Technical Systems, Inc.
150 West 88th St.
Minneapolis, MN 55420
Date: 1979 (currently re-writing - available mid '82).
Author: Daines, Dr. J.R.

Description:
Consists of a series of activities designed to illustrate the fundamental principles of hydraulic circuits, pressure and force power, pumps, fluid transmission, valves, actuators, flue power symbols, fluid storage and conditioning, as well as the fundamental principles of sequencing, counterbalancing, accumulators, pressure reducers, unloading, regeneration, holding and braking, remote control, fluid filtration and practical circuits.

CLIMATE CONTROL PROGRAMS IN NORTH CAROLINA
Source: Trades and Industrial Education
Climate Control Programs
Education Building - 588
Raleigh, NC 27611
(919) 733-7421
Date: 1980
Author: NC Department of Public Instruction

Description:
Climate control is a three year sequence of study designed to teach high school grades 10-12; techniques of installation, service and maintenance of solar energy systems and conventional climate control systems such as oil furnaces, gas furnaces, heat pumps, electric resistance furnaces, and residential wood burners; methods of energy conservation in residential and commercial buildings; and principles of introductory analysis of conventional and alternate energy sources.

Number of Pages: 24
Cost: Free - Price may change - Call or write for cost

Title: **ENERGY MANAGEMENT GUIDE FOR LIGHT INDUSTRY AND COMMERCE**
Source: U.S. Government Printing Office
Superintendent of Documents
Washington, DC 20402
Author: Kelnhofer, W.J. and Wood, L.A.

Description:
This publication is a training tool to assist small industrial and commercial organizations in an energy conservation program. It is a part of a series of guides and training aids to assist industry in making the most efficient use of the energy supply.

Cost: 70¢

Title: **UNIFIED TECHNICAL CONCEPTS - MODULE 7: POTENTIAL AND KINETIC ENERGY**
Source; UTC Coordinator, Technical Education Research Center-Southwest
4201 Lake Shore Dr.
Waco, TX 76710
Date: 1979

Description:
This concept module on potential and kinetic energy is one of thirteen modules that provide a flexible, laboratory-based physics instructional package designed to meet the specialized needs of students in two-year, postsecondary techical schools. Each of the thirteen concept modules discusses a single physics concept and how it is applied to each energy system. This module describes potential and kinetic energy and discusses the conservation of energy in mechanical, fluidal, electrical and thermal systems. Included with the concept module are twenty application modules that discuss a specific application of a single concept in a single energy system, and contain a student laboratory exercise. Laboratory modules included are flywheel, conservation of energy in collisions, kinetic energy and horsepower of an automobile, energy stored in large tanks, venturi meters, pitot tubes, energy conversion in fluid systems, gas laws, siphons, energy stored in a battery, energy stored in a capacitor, energy stored in an inductor, series and parallel capacitors, heat storage systems, electrical equivalent of heat, mechanical equivalent of heat, thermal drying, and mixing liquids at different temperatures.

Cost: Concept Modules - 80¢
Application & Supplementary Modules - 40¢ ea.
Notebook for Modules - $2.25
Instructor's Guide - $8.00

Title: **ENERGIZING VOCATIONAL INSTRUCTION**
Source: VOC ED
Vol. 54, No. 1; Pages 41-43
January 1979
Date: 1979
Author: Fowler, John M. and Kryger, King

Description:
From their experience in the National Science Teachers Association's project for an energy-enriched curriculum, the authors discuss short-range and long-range energy problems and the multidisciplinary responses that education must make to these problems. Energy/Environment/economics topics should be infused into the curriculum and vocational students prepared for environmental conservation careers.

Title: **V-TECS - SOLAR HEATING MECHANIC**
Source: Vocational-Technical Education Consortium of States
Southern Association of Colleges and Schools
795 Peachtree St., NE
Atlanta, GA 30365
Date: 1980
Author: Jacobs, Dan. K. and Associates

Description:
The principle elements of this catalog are performance objectives and performance guides for the occupation of Solar Heating Mechanic. Also included is a standard tool list for Solar Heating mechanics and a listing of literature related to this occupation. Very easy to follow.

Number of Pages: 340
Cost: $64.00

Title: **UNIFIED TECHNICAL CONCEPTS - MODULE 9: ENERGY CONVERTORS**
Source: UTC Coordinator, Technical Education Research Center - Southwest
4201 Lake Shore Drive
Waco, TX 76710
Date: 1979

Description:
This module discusses (1) a variety of energy convertors, and (2) the efficiency of the individual energy convertors and systems. Included are thirteen application modules that discuss a specific application of a single concept in a single energy system, and contain a student laboratory exercise. Laboratory modules are turbines, fluid pumps, fans and blowers, wind power, vacuum pumps, electric generators, alternators, electric motors, solenoids and relays, photovoltaic materials, boilers, thermoelectric generators, and solar collectors.

Cost: 80¢ ea.
Notebook for Modules: $2.25
Instructor's Guide: $8.00

Title: **ENERGY MANAGEMENT TECHNICIAN CURRICULUM DEVELOPMENT - FINAL REPORT**
Source: Washington State Commission for Vocational Education
Olympia, Washington
Date: 1980
Author: Sarvis, Robert E.

Description:
This document is the result of an effort to develop a comprehensive curriculum to train community college students as energy management technicians. The main body of the document contains the energy management technician training curriculum and course content for the proposed courses in the two-year sequence; a report of how the curriculum was developed and evaluated makes up the rest of the document. The curriculum addresses the following needs: updating technical skills for design and review of energy systems; acquiring familiarity with historical approaches and current technologies for energy conversion and use; developing management abilities; and learning to establish a viable energy management organization. Content areas covered in the curriculum include an introduction to energy issues and policies, materials and design in conservation, solar energy concepts, advanced solar energy concepts, renewable energy systems, fundamentals of heat transfer, energy usage of commercial buildings, energy auditing/calculations, energy control devices, energy building codes, updating seminars, and on-the-job training. Each course description contains student objectives and characteristics, teaching methodology, supplemental instructional materials, and films and reference sources.

Cost: Contact Source

Trades and Industrial Mechanics

Technical Materials

Title: ENERGY MANAGEMENT PLAN
Source: State of Albama
Department of Education
State Office Building
Montgomery, AL 36130
Date: 1980
Author: Staff at Dept. of Education

Description:
This document contains the State Department of Education Energy Conservation Plan for conserving energy in their schools. They believe that if these measures are implemented, that energy consumption can be reduced by 20 percent with capital outlay. Most every energy consuming area of a school is addressed. some areas covered are: Developing an Energy Management Plan for a School System, Conserving Energy, Combustion Tests for Boilers, Heating Equipment, Energy Managementfor Food Service Personnel, Home Economics, Agribusiness Education, and Energy Conservation in Equipment Management. Many others are addressed. Also included is a bibliography.

Number of Pages: 54
Cost: Free

Title: MEETING THE ENERGY NEEDS—SOLAR TECHNICIAN TRAINING PROGRAMS
Source: American Technical Education Association, Inc. Journal
Vol. 7, N 5 Pages 11-12
March-April 1980
Date: 1980
Author: Panitz, Theodore

Description:
This article differentiates between solar technicians and energy technicians. It points out that, because of the energy crisis, there has been a great deal of activity in the solar energy field, with the result that the field could become saturated with solar technicians. This article describes a program to train energy technicians that was developed at Cape Cod Community College.

Title: PLANNING A WIND POWERED GENERATING SYSTEM
Source: EARS
Box 545
La Veta, CO 81055
Date: 1977
Author: Enertech Corporation

Description:
This manual was developed to aid the layman in becoming familiar with systems components and operating principles of wind-powered systems. Chapters on basic principles, systems and components, site evaluation, power requirements, tower height, battery storage systems.

Number of Pages: 46, pamphlet
Cost: $2.00

Title: POWER INVERTER TECHNOLOGY
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978
Author: Lindsay, T.J.

Description:
You'll learn about the operation of transistors, SCR's, various inverters, and waveform filters. Included are photos and schematics of five commercial units, from very small power modules to big industrial units.

Number of Pages: 19
Cost: $5.00

Title: THE HOMEBUILD, WIND-GENERATED ELECTRICITY HANDBOOK
Source: Earthmind
4844 Hirsch Road
Mariposa, CA 95338
Date: 1975
Author: Hackleman, Michael

Description:
Step-by-step directions on finding and reconditioning discarded wind machines. Deals with raising towers, installing the wind machine, the control box, standby generators and more.

Number of Pages: 194
Cost: $10.00

Title: INDUSTRIAL ENERGY CONSERVATION: 101 IDEAS THAT WORK
Source: Energy Management Section,
General Motors Corporation
Rm 250 Argonaut A
Detroit, MI 48202
Date: 1977

Description:
Designed to reduce costs in an automobile plant, this book prepared for supervisors and workers in automobile industry plans covers areas including product specification changes, heat recovery applications, central control and monitoring systems, improved equipment controls, and air supply and exhaust systems. Gives specific examples of problems and solutions by which energy waste was reduced, the cost and the savings.

Number of Pages: 100
Cost: Contact Source

Title: ENERGY FOR THE EIGHTIES
Source: Florida Vocational Journal
Vol. 6, No. 4; Pages 15-17
December 1980
Date: 1980
Author: Kropp, Dianne

Description:
This article states that vocational education should be an instrumental force in training workers for the demands of energy conservation measures and the use of new sources of energy.

Title: SOUTH JERSEY SCHOOL SAVES ENERGY
Source: Modern Schools
Pages 8-9
December 1976
Date: 1976

Description:
This article describes how a group of high school students in New Jersey led by their teacher have developed a number of energy-conserving techniques that add up to substantial savings for the school budget.

Title: TECHNICIAN'S AND EXPERIMENTER'S GUIDE TO USING SUN, WIND, AND WATER POWER
Source: Parker Publishing Co, Inc.
West Nyack, NY 10994
Date: 1978
Author: Pierson, Richard E.

Description:
This guide, written to help combat the soaring cost of electricity by providing how-to information and instructions for experimenters, technicians and all those interested in generating electricity by using free energy sources.

Number of Pages: 270
Cost: $10.95

Title: TECHNICIANS IN THE ENERGY PIPELINE: HOW MANY AND WHAT KIND
Source: Technical Education News
Vol. 34, No. 3 Pages 2-5
May/June 1975
Date: 1975
Author: Harris, Norman C.

Description:
This article reviews the types of energy, estimates future needs for technicians, and discusses curriculum and training needs.

Title: LOW ENERGY FUTURES FOR THE UNITED STATES
Source: U.S. Dept. of Energy, Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830

Description:
This document covers a range of available technologies and public policies which could reduce future energy consumption to below current levels. Areas addressed are conservation in buildings, structural changes, appliance and space conditioning, conservation in industry, and conservation in transportation including passenger and freight transportation.

Number of Pages: 125
Cost: Contact Source

Title: **SOLAR ENERGY FOR PACIFIC NORTHWEST RESIDENTIAL HEATING**
Source: U.S. Department of Energy
1992 Federal Building
915 Second Avenue
Seattle, WA 98174
Author: U.S. Dept. of Energy

Description:
A comprehensive technical guide to heating with solar energy in the Pacific Northwest. Includes a glossary of terms.

Cost: Free - Price may change

Oregon Agencies Providing Materials and Assistance

Agency: **Agribusiness Council of Oregon**
222 SW Harrison
Portland, OR 97204
Contact: Dalton Hobbs
Phone: 221-1257
Material: A pamphlet - "Energy Cost Reducation for Automation Service Facilities - Published - 1977

Agency: **American Institute of Architects**
519 SW 3rd
Portland, OR 97204
Contact: Bill Davis, AIA
Phone: 222-3379 - Portland
OR Linda Barnes - 248-1995
Southern Oregon - Jeff Barnes, AIA - 488-1184
Southeast - Bend - Les Lambert (Engineer) - 388-2623
Salem-Eugene - Steve Baker, AIA - 683-5927
Service: Guest Speakers
Material: Flier - "Energy in Architecture"

Agency: **Automotive Service Councils, Inc.**
18600 S.E. Stark
Portland, OR 97233
Contact: Teresa Stevenson
Phone: 667-2696

Agency: **Energy Conservation Section**
Bonneville Power Administration (BPA)
P.O. Box 3261
Portland, OR 97208
Contact: Don Davey
Publication: RESOURCE GUIDE FOR ENERGY CONSERVATION 1981

This Guide, published by BPA in cooperation with the Oregon Department of Education lists some resources and sources of information on energy conservtaion that are available in the Pacific Northwest. Fifty-three (53) various agencies are listed, along with the materials available, contact people, etc. This Guide is a valuable tool for the vocational educator in locating Oregon resources to aid in infusing energy conservation education into the vocational program. Listed below are some of the agencies listed in the Guide which should be most helpful in assisting the vocational instructor in locating materials, audio-visuals and guest speakers.

Agency: **Bonneville Power Administration**
P.O. Box 3621
Portland, OR 97208
Contact: Don Davey
Phone: (503) 234-3361
Material: BPA is able to provide pamphlets and films on energy conservation, as well as arranging for speakers in Western and Eastern Oregon. Of interest to the Construction Cluster is a film entitled "The Insulation Story."

Agency: **Columbia Basin Electric Cooperative, Inc.**
Box 393
Heppner, OR 97836
Contact: Rodney A. Aho
Phone: (503) 676-9146
Material: This agency has a monthly publication and can arrange for speakers.

Agency: **Eastern Oregon State College**
LaGrande, OR 97850
Contact: Dr. Robert Ward
Phone: (503) 963-2171
Material: The College has publications and speakers available on topics such as solar insolation, general energy topics, and heating with wood stoves.

Agency: **Energy & Man's Environment (Oregon EME)**
Contact: For information and assistance concerning vocational education, contact Ray Thiess, Oregon Department of Education.
Phone: 1-800-452-7813
Material: EME has available a variety of publications on general energy conservation, including an energy education bibliography and a glossary.

Agency: **Eugene Water & Electric Board**
500 East 4th Avenue
Eugene, OR 97440
Contact: Al Hughes
Phone: (503) 484-1125
Material: EWEB is willing to assist the teacher in locating speakers to speak in the areas of Energy Efficient Buildings, Weatherization Techniques, etc. related to the Construction Cluster.

Agency: **Oregon Alliance of Business and Education (NAB) (Formerly IPAR)**
516 SE Morrison
Portland, OR 97204
Contact: Jean Pentacost
Phone: (503) 226-4063
Material: NAB will arrange for speakers in the general area of energy conservation. Phone to inquire if NAB can arrange speakers in your vocational cluster area.

Agency: **Metropolitan Service District**
527 SW Hall
Portland, OR 97201
Contact: Karen Tweten
Phone: (503) 221-1646
Material: This agency has available a variety of publications, slide shows and films. They will also assist in arranging for speakers.

Agency: **Midstate Electric Cooperative, Inc.**
P.O. Box 127
La Pine, OR 97739
Contact: John Sims
Material: Call or write to see if this agency can help specifically in your cluster area.

Agency: **Northwest Food Processors Association**
2828 SW Corbett
Portland, OR 97201
Contact: Tom Ethen
Phone: (503) 226-2848
Material: Representing food processors in the Pacific Northwest, this agency has a few publications available, as well as speakers. Call to see if they can meet your specific needs.

Agency: **Northwest Natural Gas Company**
123 NW Flanders Street
Portland, OR 97209
Contact: Dale Johnson
Phone: 226-4211 Ext. 3504
Material: Write for a catalog free from NWNG, entitled "1981-1982 Classroom Aids from Northwest Natural Gas Grades 1-12." Included are Speaker Presentations, 16mm films, Video Tapes and Film Strips available for loan to NWNG service area. Also listed are phone numbers for local offices of NWNG.

Agency: **Oregon Alliance of Business, Labor and Education, Inc.**
921 SW Washington, Suite 403
Portland, OR 97205
Contact: Mike Hennessy
Phone: (503) 226-4063
Service: ABLE has as its goal to assist teachers in supplementing classroom studies with resource people from business and the community. They will assist teachers in arranging for guest speakers and fieldtrips. (Formerly known as IPAR).

Agency: **Western Sun**
Labor & Industrial Bldg.
Salem, OR 97310
Contact: Dave Robinson
Phone: 1-800-452-7813
Service: Solar and wind energy workshops.

Agency: **Oregon Appropriate Technology**
P.O. Box 1525
Eugene, OR 97440
Contact: Don Cason
Phone: (503) 683-1613
Service: Education programs in appropriate technology.

Agency: **Oregon Department of Education**
700 Pringle Parkway, S.E.
Salem, OR 97310
Contact: Howard Brock
Ray Thiess
Phone: 1-800-452-7813
(Toll free from Oregon)
Service: Publications available: Know-Pak: Energy Conservation Education - a selected summary of current topics on energy education.
Energy Help for You - a brochure that explains the department's Energy Education and Management Program.
Oregon Energy Education and Management Handbook - a guide to the development, implementation, and monitoring of local energy education and management programs in local school districts.

Agency: **National Energy Information Center**
Washington, DC
Phone: (202) 252-8800
Service: The NEIC is a telephone information service that provides quick responses to your energy questions. The information service is available Monday through Friday, 8 a.m. to 5:30 p.m. Remember the time difference!

Agency: **Oregon Department of Commerce**
Building Codes Division
Labor & Industries Bldg.
Salem, OR 97301
Contact: Walter Friday, Room 104
Service: Can provide information regarding building codes in Oregon.

Agency: **Oregon Department of Energy**
Labor and Industries Bldg.
Salem, OR 97310
Contact: William Sanderson
Service: This agency has a variety of publications available and will assist in arranging for speakers in the area of energy conservation. Call to see if they can assist you in your specific vocational area.

Agency: **Oregon Department of Environmental Quality**
Solid Waste Division
522 SW Fifth
Portland, OR 97207
Contact: Valerie Lee
Phone: (503) 229-6044
Service: This agency has available a variety of publications related to recycling. They are willing to work with educators in the area of recycling education.

Agency: **Oregon Department of Veterans' Affairs**
1225 Ferry Street, S.E.
Salem, OR 97310
Contact: Dennis Nelson
Phone: (503) 378-6059
Service: This agency is willing to provide speakers in the area of energy conservation from a lender's point of view.

Agency: **Oregon Institute of Technology**
Geo-Heat Utilization Center
Klamath Falls, OR
Service: This center has a variety of publications available in the area of geothermal energy. Write for a list of materials available.

Agency: **Oregon Museum of Science & Industry (OMSI) Energy Center**
4015 SW Canyon Road
Portland, OR 97221
Contact: Sarah Asby
Phone: School Tours: (503) 248-5936
Energy Center (503) 248-5920
Service: OMSI has a variety of services available to the educator such as tours through TERA ONE - Energy Conservation Laboratory, newsletters, films, and speakers. Call to see if they have a service to fit your needs.

Agency: **Oregon Energy Extension Service**
Corvallis, OR 97331
Contact: Dr. Owen Osborne
Phone: (503) 754-3004
Service: This agency has a variety of publications available to the vocational educator, especially in the areas of agriculture, home economics and forestry. Call to see if they have something available to fit your vocational area.

Agency: **Oregon State University Office of Energy Research and Development**
Corvallis, OR 97331
Contact: James Knudsen
Service: Encouraging energy education and conservation, this agency has a variety of publications, films and speakers available. Contact them for your specific vocational area to determine if they can be of assistance.

Agency: **Oregon Water Resources Department**
Mill Creek Office Park
555 13th Street N.E.
Salem, OR 97310
Contact: Gary Oberholtzer
Phone: (503) 378-3739
Service: Can provide information related to hydroelectric developments in Oregon.

Agency: **Pacific Power & Light**
920 SW 6th
Portland, OR 97204
Contact: Larry Poole
Phone: (503) 243-4345
Service: This agency has a large variety of publications, films, educational programs and speakers available in the area of energy and energy conservation. Call or write to see how they can be of assistance in your specific vocational area.

Agency: **Portland General Electric Company**
121 SW Salmon Street
Portland, OR 97204
Contact: Keith Loeffler
Phone: (503) 226-8517
Service: This agency can provide a variety of services to the educator within PGE's service area. Many publications, speakers and classroom programs are available. Callor write for a catalog or specific service to see if they can assist you.
Contact: Alice Ross
Phone: 226-8456
Services: Call or write for a list of PGE's publications.
Agriculture - Booklets (Technical Information, Media Resources, Guest Speaker
Construction - Pamphlet (Retrofitting), Media Resources, Guest Speaker
Food Services - A booklet
NOTE - Services and information available only to PGE service areas.

Agency: **RAIN**
2270 NW Irving
Portland, OR 97210
Contact: John Farrell
Phone: (503) 227-5110
Service: Can provide referrals to sources of technical assistance in energy and appropriate technology.

Agency: **Reynolds Metals Company**
Northwest Operations & Public Relations
1800 SW 1st Street
Portland, OR 97201
Contact: Sherida Evans
Service: This manufacturer can provide a variety of films, and speaker related to energy conservation in the aluminum industry.

Agency: **Shell Oil Company**
1425 NE Irving
Portland, OR 97225
Contact: Bob Getts
400 108th Ave. NE
Bellevue, WA 98004
Phone: (206) 453-3000
Service: Write to Mr. Getts, Public Relations Manager for a complete list of publications and career information in the petroleum industry.

Agency: **Sierra Club**
2637 SW Water Avenue
Portland, OR 97201
Contact: Bill Gifford
Phone: (503) 222-9193
Service: This agency will provide publications and speakers related to their efforts to protect the natural environment. Also available are films and a slide show. Contact them for specific information.

Agency: **Springfield Utility Board**
250 N. "A" Street
Box 300
Springfield, OR 97477
Contact: Dave Coon
Phone: (503) 746-8451 Ext. 70
Service: This agency has some slide presentations available in the area of energy conservation and weatherization, as well as speakers. Call to see if they can meet your specific needs.

Agency: **University of Oregon**
Solar Energy Center
Dept. of Agriculture
Eugene, OR 97403
Contact: John Reynolds
Phone: (503) 686-3642
Service: The Solar Energy Center has available a variety of publications related to the use of solar energy in construction in the Pacific Northwest. They will also assist in arranging for guest speakers in this area.

Agency: **Yamhill County Energy Office**
County Courthouse
McMinnville, OR 97128
Contact: Tom Cunningham
Phone: (503) 472-9371 ext. 201
Service: This agency can provide some publications, slides and speakers in the area of energy conservation education. Call to see if they can meet your specific needs.

Agency: **National Electrical Contractors, Inc.**
Oregon Columbia Chapter
601 NE Everett
Portland, OR 97204
Contact: Grace Eastman
Phone: (503) 233-5787

Career Information in the Energy Field

Title: ENERGY EDUCATION CATALOG: PROGRAMS IN AMERICAN COLLEGES AND UNIVERSITIES
Source: American Council on Education,
Publication Sales, Section PR-3
One Dupont Circle
Washington, DC. 20036

Description:
A guide to general energy education programs, this offering lists more than 250 energy-education programs and courses offered by U.S. colleges and universities.

Cost: $15 + $2.00 handling

Title: THE SOLAR JOBS
Source: Brick House Publishing Co., Inc.
Jack Howell, Publisher
3 Main Street
Andover, MA 01810
Date: 1980
Author: Ericson, Katherine

Description:
Where to get a job in solar is addressed as well as how to get a solar education. It is complete with appendix and bibliography.

Cost: $9.95 plus $1.00 postage

Title ENERGY OCCUPATIONS HANDBOOKS
Source: Curriculum Laboratory
Vocational Technical Education
Department
Building 4103 - Kilmer Campus
New Brunswick, N.J. 08903
Date: 1979

Description:
This student handbook includes surveys of energy fields and occupations, career guidance activities for energy-career decision-making and choice, and resources for energy career education, including state and national educational programs, selected student and professional readings, audio-visual and curriculum materials, and a directory of related businesses and industries. Over sixty different fields and sixty different occupations are described in some detail. Career guidance sections provide practical advice for selecting, preparing for, and obtaining employment in energy-related fields.

Number of Pages: 372
Cost: Contact Source $7.00

Title: CAREERS IN ENERGY INDUSTRIES
Source: DOE Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Attention: Citizens' Assistance Section
Date: 1980

Description:
Describes sketches of jobs that will be in demand in energy-related industries ranging from exploration and processing of raw material to construction and operation of power plants. Employment trends and personnel estimates for blue-collar and white-collar jobs, with two tables indicating job demands in various fields are given. Order number EDM-019.

Number of Pages: 12
Cost: 1 copy - free

Title: **ENERGY, JOBS AND THE ECONOMY**
Source: EARS
Box 545
LaVeta, CO 81055
Date: 1979
Author: Grossman, Richard, & Daneker, Gail

Description:
Proposes that we scrap the policy of building large, capital-intensive energy systems, and instead adopt a program of active energy conservation, plus the development of solar energy. Such a program would not only be better for our health and environment, it would also create new jobs and greater economic security.

Number of Pages: 128
Cost: $3.45

Title: **POLICIES AND MANPOWER NEEDS RELATED TO EMERGING ENERGY SOURCES IN ARIZONA AND NEW MEXICO**
Source: ERIC/CRESS
Box 3AP
Las Cruces, NM 88003
Date: 1977
Author: Edington, et al

Description:
The purpose of the project referred to in this publication was to identify what skills would be needed in emerging energy sources and to discover any new occupations for which additional post-high school, vocational/technical training would be needed. The manpower needs were projected for the next 5-10 years.

Number of Pages: 109
Cost: Free - Price may change

Title: **APPROPRIATE JOBS - COMMON GOALS OF LABOR & APPROPRIATE TECHNOLOGY**
Source: National Center for Appropriate Technology
Box 3838
Butte, Montana 59701
Date: 1980
Author: David Quammen

Description:
Discusses the effects of energy and technology on the labor force. Some areas addressed are: Labor, Energy and the GNP, ENERGY FORM AND ENERGY USE, Electricity and the Worker, Conservation and the Worker, Solar and the Worker, and many others. Also includes a bibliography.

Number of Pages: 14
Cost: Free

Title: **ENERGY CONSERVATION WORKSHOP - TRAINING REQUIREMENTS FOR TECHNICIANS**
Source: National Technical Information Service
U.S. Department of Commerce
Springfield, VA 22161
Date: 1978

Description:
The training requirements of skilled technicians who will be required to install, operate, and maintain the advanced equipment and systems being developed by the division of power systems of the Department of Energy (DOE) were studied. Community college educators and DOE technology program administrators were brought together in a workshop setting for discussions on the status of current programs, future needs, and solutions to needs. Included are sections containing conclusions and recommendations, background and a report of the conference.

Cost: $5.25

Title: **ENERGY-RELATED TECHNOLOGY PROGRAMS IN COMMUNITY AND JUNIOR COLLEGES: AN ANALYSIS OF EXISTING AND PLANNED PROGRAMS**
Source: National Technical Information Service
Springfield, Virginia 22161
Date: 1976
Author: Doggette, John R.

Description:
This study was conducted to provide a basis for planning for needed energy-related occupational technology programs in two-year educational institutions. This document reports on: (1) the number of existing and planned programs in petroleum technology, coal-mining technology, nuclear energy technology, solar energy technology, laser-optics technology, geothermal energy technology, alternative energy sources, energy conservation, and electrical energy technology; (2) the number of such programs in various geographical areas and at various kinds of institutions; (3) the current and anticipated enrollments in such programs; (4) the number of students who have already graduated from such programs; (5) the degree and type of cooperation between the colleges and energy industries; and (6) the degree of college interest in attending a working conference to assess occupational needs in energy areas. Included are a description of the research methodology, and the survey instrument, as well as a list of the institutions having existing energy programs.

Title: **SOLAR ENERGY COMMERCIALIZATION AND THE LABOR MARKET**
Source: National Technical Information Service, U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Date: 1978
Author: Jerris, G., and Burns, B.

Description:
This paper discusses the potential impacts of solar energy commercialization on labor demand, and conversely, the potential impacts of the labor supply system on solar energy commercialization.

Number of Pages: 14
Cost: $3.00

Title: **SOLAR ENERGY EMPLOYMENT INFORMATION FROM CASE STUDIES: AN EMPLOYMENT STUDY**
Source: National Technical Information Service, U.S. Department of Commerce
Springfield, VA 22161
Date: 1978
Author: Blair, Larry M., Burnett, Wm. D. & Mason, Bert

Description:
This project used case studies to analyze job requirements and determine whether economies of scale have altered labor requirements.

Cost: Contact Source

Title: **DEVELOPMENT AND IMPLEMENTATION OF TRAINING CURRICULUM/PROGRAM IN SOLAR HEATING AND COOLING AT THE TECHNICIAN LEVEL**
Source: Texas Education Agency
201 East 11th St.
Austin, TX 78701
Date: 1977
Author: Kuhnle, Carl J. Jr.

Description:
This program is designed to address the increasing demand for trained personnel to support the installation and maintenance of solar energy systems at residential and commercial sites. Three main objectives of the proposed program are: (1) to develop a flexible curricula to train a solar heating and cooling workforce; (2) to identify and design the facets of a training program to train this workforce; and (3) to foster implementation of the technology and validate curricula through provision of seminars, workshops, short courses, and public information releases.

Cost: Contact Source

General Energy Education Instructional Materials

Title: ENERGY ADVENTURE
Source: Amoco Teaching Aids
P.O. Box 1400K
Dayton, Ohio 45414

Description:
These materials review energy sources, history, production, distribution, supplies, problems, and conservation for grades 9-12. The teacher's guide provides information, experiments, and various classroom activities. Ten exhibits are included in the form of maps, charts, graphs, and illustrations. Seven student activity sheets can be used for individual lesson plans, assignments, or testing. Spirit masters are included.
Write for a catalog.

Number of Pages: 28
Cost: $1.00

Title: WIND POWER - INSTRUCTIONAL MATERIALS
Source: Arkansas State Dept. of Education
Division of Vocational, Technical and Adult Education
Little Rock, Arkansas
Date: 1980
Author: Jordan, Kenneth; Thessing, Dan

Description:
This document is one of five learning packets on alternative energy developed as part of a descriptive curriculum research project in Arkansas (see note). The overall objectives of the learning packets are to improve the level of instruction in the alternative energies by vocational exploration teachers, and to facilitate the integration of new content on energy into existing vocational programs. Each learning packet contains unit objectives, information, transparency masters, lecture outline, suggested activities, student assignment sheets, tests, and answers to the tests. This unit on wind power covers the following topics: introduction to wind power; historical development of wind power in the United States; initial considerations and costs of wind power; the basics of a wind-powered energy conversion system; and the energy research and development administration wind energy program. A glossary is also provided.

Cost: Contact source

Title: ENERGY AUDITS
Source: Center for Occupational Research and Development
601 Lake Air Drive, Suite C
Waco, TX 76710

Description:
This course provides an overview of the purpose, objectives and mechanics of the energy audit process. Full background and procedural instructions precede case studies and lab practice in auditing. Finally, audit analyses are undertaken, with student recommending remedial actions based on analyses of his/her practice audits.

Cost: $27.50

Title: ENERGY ECONOMICS

Description:
Energy Economics is a course designed to familiarize the student with the energy-conserving and cost-saving measures that are available, as well as the analysis techniques that are necessary for accurate evaluation of energy projects.

Cost: $12.50

Title: ENERGY CONSERVATION

Description:
Energy Conservation is designed to give the student technical knowledge and specific skills required to perform conservation measures relative to the most common energy uses. The student will learn and utilize the basic principles of energy conservation and efficiency.

Cost: $17.50

Title: **ENERGY CONSERVATION EDUCATION AND THE COMMUNITY COLLEGE**
Source: Community and Junior College Journal
Vol. 48, 3 pages 16-9
November 1977
Date: 1977
Author: Myran, Gunder A.

Description:
This article describes a regional program for educating the public about energy conservation and for solving community energy problems.

Title: **A TEACHER'S INTRODUCTION TO ENERGY AND ENERGY CONSERVATION: SECONDARY**
Source: Division of Education Redesign and Renewal, Ohio Dept. of Education
65 South Front St.
Columbus, OH 43215
Date: 1975

Description:
This document is intended to give the secondary school teacher background information and general suggestions for teaching units and correlated learning activities related to energy and energy conservation. Sections are directed to: a problem shared by all, causes, what is energy? energy sources, searching for solutions, conservation: an ethic for everyone, a glossary, and an extensive bibliography.

Cost: Contact Source

Title: **TRANSPORTATION. TEACHER'S GUIDE AND STUDENT GUIDE. NET ENERGY UNIT - DRAFT.**
Source: Energy and Education Action Center, U.S. Office of Education
Reporters Building, Rm. 514
300 7th St., N.W.
Washington, D.C. 20202
Date: 1979
Author: Treagust, David F.

Description:
This module is intended to increase the students' comprehension of costs, in terms of money and in energy, involved in various modes of transportation. Four main inquiries are covered in the module: (1) money saved by car pooling to school; (2) reductions in fuel consumption possible without car pooling; (3) comparisons of inter-city and urban transportation modes; and (4) vehicle maintenance to reduce fuel consumption. Two to three class periods are required to complete the module.

Cost: Contact Source

Title: **HOUSEHOLD ENERGY - Gr. 9-12**
Source: Ginn and Co.
P.O. Box 2649
1250 Fairwood Avenue
Columbus, Ohio 43216
Date: 1976

Description:
This is one of Ginn's Individualized Science Instructional System/ISIS programs. Designed as a 3-week module that is self-contained, the program can be used as an individual program if desired and infused into the existing curriculum.

Number of Pages: 77
Cost: Student: $3.75
Teachers: $5.95
Test forms A & B: $12.00

Title: **LOW ENERGY TECHNOLOGY - A UNIT OF INSTRUCTION IN GENERAL ENERGY CONCEPTS**
Source: Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Miller, Donna; Becker, William J.

Description:
This instructional package includes lessons on sources of energy, conversions of energy, advantages and disadvantages of sources of energy, energy consumption and energy problems and conflicts.

Number of Pages: 23
Cost: Free

Title: **LOW ENERGY TECHNOLOGY - A UNIT OF INSTRUCTION IN HOUSING AND HOME ENVIRONMENT LIGHTING**
Source: Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611
Date: 1980
Author: Beulieu, Barbara; Becker, Wm.; Plowman, Faye

Description:
Recognizing that electric bills reflect the increased costs of energy, this instructional package devotes itself to informing the student through a variety of activities that intelligent lighting is one way to conserve energy and reduce the size of the electric bill.

Number of Pages: 25
Cost: Free

Title: **ENERGY AND ENVIRONMENTAL TECHNOLOGY: AN ADVANCED COLLEGE COURSE FOR SECONDARY SCHOOL TEACHERS**
Source: Journal of Chemical Education
Vol. 57, No. 11, Nov 1980
Pages 798-800
Date: 1980
Author: Kimmel, Howard S.; and others

Description:
Describes a course to prevent secondary teachers with an overview of the energy problem and provide technical background required for an understanding of energy conservation methods and future alternatives. Emphasis placed on subject matter that can be incorporated into secondary school curricula.

Title: **SOLAR ENERGY EDUCATION PACKET FOR ELEMENTARY AND SECONDARY STUDENTS**
Source: Minnesota Curriculum Services Center
3554 White Bear Avenue
White Bear Lake, MN 55110
Date: 1979
Author; Center for Renewable Sources

Description:
This publication consists of individual learning activities that can be used with young students through high school. This learning packet begins with solar facts and terminology to give the student background information. Included also are a discussion of passive solar, active solar systems (high school level), energy conservation, art-oriented activities, and bibliography. Lots of do-it-yourself activities are included.

Number of Pages: 59
Cost: $1.10

Title: **SOLAR ENERGY - SOLUTION OR PIPEDREAM**
Source: Mississippi Energy Extension Center
P.O. Box 5406
Mississippi State, MS 39762
Date: 1978
Author: Polk, Joyce

Description:
This series of lessons and class activities is designed for presentation in a sequence of nine class days. The collection is intended to provide the student in advanced science classes with awareness of the possibilities and limitations of solar energy as a potential solution to the energy crisis. Included are discussion of the following: (1) solar energy variables (weather, geography, and day/night problems); (2) characteristics of solar heating and cooling; (3) construction of a solar collection; (4) electrical production by solar cell; and (5) characteristics of solar electrical production.

Cost: Contact Source

Titles: **SELECTING WATER—PUMPING WINDMILLS**
CURRENT WIND ENERGY RESEARCH PROJECTS
A DIRECTORY OF WINDMILL SALES AND SERVICE
ELECTRICITY GENERATING WINDMILLS
SOURCES OF WIND ENERGY INFORMATION
TAPPING NEW MEXICO'S WIND RESOURCE

Source: New Mexico Energy Institute
P.O. Box 3E1
Las Cruces, NM 88003
Phone: 505/646-1745

Description:
These pamphlets are available free from the New Mexico Energy Institute. The titles are descriptive of the contents.

Titles: **LNG DEMONSTRATION** - Guest speaker demonstrates LNG
NATURAL GAS AT MIST, OR - Video tape and speaker
GEOTHERMAL EXPLORATION AND PROJECTS - Video tape and speaker
WEATHERIZATION - Speakers
WEATHERIZATION/SOLAR - Speakers
COOKING WITH GAS - Speaker
NATURAL GAS DISTRIBUTION JOB - Speakers
NATURAL GAS CUSTOMER SERVICES JOBS
ENERGY GOING TO MARKET - Film - 10 minutes
CAREERS IN A LARGE INDUSTRY - Film - 10 minutes
GAS ENERGY FOR AMERICA - Film - 25 minutes
THE ENERGY PICTURE - ¾" Video tape - 14 minutes
WHAT DO YOU DO AT THE GAS COMPANY? - ¾" Video tape

Source: Northwest Natural Gas Co.
123 N.W. Flanders
Portland, OR 97209

Description:
Resources about Natural Gas by Topic

Title: **THE DESIGN AND DEVELOPMENT OF A CURRICULUM IN ENERGY CONSERVATION TO TRAIN SECONDARY AND POST-SECONDARY VOCATIONAL STUDENTS**

Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, Texas 75426
214-886-5623

Date: 1979

Author: Orsak, Charles; Green, C. Paul

Description:
Designed for practical hands-on secondary and postsecondary vocational programs and adult/continuing education programs, this eleven-module curriculum was developed to equip both male and female students with the capabilities to identify, monitor, manage, and curb energy usage in their daily lives and vocational pursuits. It is intended for use as support material for existing related curricula. Each module may be used independently, collectively with the other modules in a course or program on energy conservation, or integrated into conventional courses. Topics include (1) awarness of the energy dilemma, (2) surveying energy usage, (3) understanding utility bills, (4) how to search for energy conservation opportunities, (5) lighting conservation opportunities, (6) hot water heating conservation opportunities, (7) appliance energy conservation opportunities, (8) building construction versus energy consumption, (9) human comfort and energy conservation, (10) heating, ventilating, and air conditioning conservation opportunities, and (11) economics of energy conservation. Each module is divided into units to give the instructor flexibility in selecting support materials. The basic format for modules is module description, goal statement, and unit outlines with specific objectives.

Cost: $24.00

Title: **ENERGY CONSERVATION CURRICULUM FOR SECONDARY AND POST-SECONDARY STUDENTS MODULE 1: AWARENESS OF THE ENERGY DILEMMA**
Source: Contact Occupational Curriculum Laboratory
East Texas State University
Commerce, Texas 75428
214-886-5623
Date: 1979

Description:
This module is the first in a series of eleven modules in an energy conservation curriculum for secondary and postsecondary vocational students. It is designed for use by itself, to be integrated with the other ten modules into a program on energy conservation, or to be integrated into conventional vocational courses as a unit of instruction. The objective of this module is to instill awareness that there is a growing crisis in energy supply. First, an introduction to the module and definitions of key terms are provided. Next, the text is presented in the following two units: (1) an overview of energy supply sources, including oil, gas, coal, nuclear, and hydro-electric power; and (2) a discussion of potential of alternate energy sources such as solar power, wind, geothermal, tidal power, ocean thermal, and biomass. The information in each unit is presented in lecture format accompanied by laboratory exercises and question/examples for class discussion. A bibliography and several charts illustrating the text material are found at the end of the module.

Title: **AN EDUCATOR'S GUIDE TO THE THREE Es: ENERGY/ECOLOGY/ECONOMICS**
Source: Sears, Roebuck and Co.
Consumer Information Services
D/703 Sears Tower, Chicago, IL 60684
Date: 1980

Description:
This is a teacher's resource guide which introduces concepts on energy, ecology, and economics providing the teacher with background information, instructional objects, key concepts, a pretest, interdisciplinary learning activities, and sources for additional information.

Number of Pages: 24
Cost: $1.00

Title: **ENVIRONMENTAL EDUCATION ACTIVITIES**
Source: Social Science Record
Vol. 12, No. 2, Pages 28-33
Winter 1975
Date: 1979
Author: Lelah, Joey J.

Description:
This article presents 13 multidiscilinary teaching techniques which center on the environment, particularly on energy conservation, involving concepts such as stewardship, scarcity, planning, valuing, survival and interdependence.

Title: **UNIFIED TECHNICAL CONCEPTS - PHASE I (MODULARIZING INSTRUCTIONAL MATERIALS USING APPLICATIONS OF TECHNICAL CONCEPTS - FINAL REPORT**
Source: Technical Education Research Center - Southwest
4201 Lake Shore Drive
Waco, Texas 76710
Date: 1978

Description:
To evolve a new methodology and system for teaching physics to students aspiring to become (or to become more competent as) technicians in a variety of technologies, this research and development effort was initiated. The project's thesis stemmed from a notion that the study of physics would be more accepted and assimilated by students if concepts were systematically unified and presented in practical examples directly related to the technology under study. Appropriate subject matter was unified under twelve concepts; instructional materials were prepared to introduce and apply the concepts. Applications were limited in scope to a single energy system (electrical, mechanical, fluidal, and thermal). Following this plan of concepts and applications, 130 pamphlets (modules) of instructional materials were prepared. Appropriate portions of these materials were used in three different technology programs in three different postsecondary technical schools. Initial indications suggest that the thesis and materials are valid. A follow-on project is to provide additional materials and further use-analyses in technical schools and in industrial training programs. (Appendixes include (1) example concept module: 3-0, "Work and Energy," (2) example application module: 6T2 "Heat Flow Through Insulation," (3) module control forms. (4) modules used in experimental instructional programs, and (5) a pamphlet: "Unified Technical Concepts.")

Title: **HARDEE COUNTY ENERGY EDUCATION ACTIVITIES - Middle School Level**
Source: Tri-County Teacher Education Center
Wayne H. Duncan, Director
426 School Street
Sebring, FL 33870
Author: Allen, Rodney F., Editor

Description:
Written by Florida educators, this activity guide is full of fun energy-related instructional activities. An excellent tool for integrating energy education into the existing curriculum.

Number of Pages: 55
Cost: Free - Price may change

Title: **HIGHLANDS COUNTY ENERGY EDUCATION ACTIVITIES - High School Level**
Source: Tri-County Teacher Education Center
Wayne H. Duncan, Director
426 School Street
Sebring, FL 33870
Author: Allen, Rodney F., Editor

Description:
Written by Florida educators, this activity guide is full of energy-conservation related lessons which are easily integrated into the existing curriculum.

Number of Pages: 54
Cost: Free - Price may change

Title: **OKEECHOBEE COUNTY ENERGY EDUCATION ACTIVITIES - Middle School Level**
Source: Tri-County Teacher Education Center
Wayne H. Duncan, Director
426 School Street
Sebring, FL 33870
Author: Allen, Rodney F. Editor

Description:
Written by Florida educators, this activity guide presents lessons on energy conservation which are easily integrated into the existing curriculum.

Number of Pages: 87
Cost: Free - Price may change

Title: **SOLAR ENERGY II Science Activities in Energy DOE/CA -0001**
Source: U.S. Department of Energy
Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Date: 1980
Author: Oak Ridge Associated Universities

Description:
This activities series has as its purpose to illustrate certain principles and problems related to various forms of energy and to their development, use, and conservation. Most activities can be completed with materials readily available in the classroom.

Cost: Free

General Energy Conservation Technical Materials

Title: ENERGY MANAGEMENT PLAN
Source: State of Alabama
Department of Education
State Office Building
Montgomery, AL 36130
Date: 1980
Author: Staff at Dept. of Education

Description:
This document contains the State Department of Education Energy Conservation Plan for conserving energy in their schools. They believe that if these measures are implemented, that energy consumption can be reduced by 20 percent with capital outlay. Most every energy consuming area of a school is addressed. Some areas covered are: Developing an Energy Management Plan for a School System, Conserving Energy, Combustion Tests for Boilers, Heating Equipment, Energy Management for Food Service Personnel, Home Economics, Agribusiness Education, and Energy Conservation in Equipment Management. Many others are addressed. Also included is a bibliography.

Number of Pages: 54
Cost: Free

Title: THE FUEL SAVERS
Source; Brick House Publishing Co., Inc.
Jack Howell, Publisher
3 Andover, MA 01810
Date: 1978
Author: Scully, Dan; Prowler, Don; Anderson, Bruce

Description:
Describes various energy savings items as insulating curtains, window boxes, solar water heaters, etc. giving the advantages and disadvantages of each. Write for a catalog of their other books.

Number of Pages: 61
Cost: $2.75, plus $1 postage

Title: ENERGY PRIMER: SOLAR, WATER, WIND, AND BIOFUELS
Source: Dell Publishing Co., Inc.
1 Dag Hammarskjold Plaza, 245 E. 47th St.
New York, NY 10017
Date: 1978
Author: Merrill, Richard and Gage, Thomas

Description:
This book includes articles on energy conservation, solar, solar architecture, water, wind biofuels, and integrated systems.

Number of Pages: 256
Cost: $7.95

Title: THE ENERGY CONSUMER
Source: DOE Office of Consumer Affairs
Room 8GO82
Washington, DC 20585

Description;
This is a free publication to keep you informed about federal energy programs and how you can get involved. It is full of resources for energy information as well as recent happenings and activities related to energy throughout the nation, including our area.

Cost: Free

Title: DISAPPEARING ENERGY - CAN WE END THE CRISIS?
Source: Doubleday & Co., Inc.
Garden City, NY
Date: 1974
Author: Shuttlesworth, Dorothy E. and Williams, Lee Ann

Description:
In this book the authors tell of the developing shortages in electricity, water power, coal, gas, petroleum, trees, and land. They discuss the past, present happenings and what may happen in the future. They give suggestions for positive things that we can do now to help avert an energy crisis.

Number of Pages: 95
Cost: $5.95

Title: **NEW LOW-COST SOURCES OF ENERGY FOR THE HOME**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1975
Author: Clegg, Peter

Description:
The basic principles of solar, wind, water, methane and wood energy systems described in clear English. Whether there is ample available enrgy for your site and how to quickly calculate it. Current solar, wind, water, wood, methane catalogs for each chapter. Are you interested in purchasing a water pump? A Swiss windmill kit? You'll find them here. Also cost estimates and economics for your new home energy systems.

Number of Pages: 252
Cost: $7.95

Title: **PATHWAY TO ENERGY SUFFICIENCY**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1979
Author: Steinhart, John S., et al

Description:
Pathway to Energy Sufficiency is a hard-headed, hopeful look at an American society 70 years in the future. It describes what it would be like to live along a soft energy path, using 36% of the energy we used in 1975. They tell how it would affect our houses, travel, countryside, factories, gardens and public institutions.

Number of Pages: 91
Cost: $4.95

Title: **SOFT-TECH**
Source: EARS
Box 545
La Veta, CO 81055
Date: 1978

Description:
Some subject areas included in this book are Tolls, Invention, Solar Wind, Biofuels, Building, Integrated Systems. Some articles include "One Highly-Evolved Toolbox" by J. Baldwin, "The Clothesline Paradox" by Steve Baer, "Underground Architecture" by Malcom Wells, etc.

Number of Pages: 176
Cost: $5.00

Title: **EPRI JOURNAL**
Source: EPRI JOURNAL
Electric Power Research Institute
P.O. Box 10412
Palo Alto, CA 94303
Date: Published monthly
Author: Electric Power Research Institute, Inc.

Description:
A journal published monthly by the Electric Power Research Institute who was founded by the nation's electric utilities to develop and manage a technology program for improving electric power production, distribution, and utilization.

Title: **SCIENTIFIC AMERICAN · ENERGY**
Source: W.H. Freeman and Company
660 Market Street
San Francisco, CA 94104
Date: 1979

Description:
This book consists of a compilation of Scientific American articles related to energy. Chapters include: Energy Use, Conversion, Transportation, and Storage, Coal; Nuclear Energy; Conservation, Pollution Problems, Solar Energy, and Beyond, and an appendix.

Number of Pages: 221
Cost: Contact Source

Title: **FORGOTTEN FUNDAMENTALS OF THE ENERGY CRISIS**
Source: Journal of Geological Education
Vol. 28, No. 1; Pages 4-35
Jan 1980
Date: 1980

Description:
Examines what is believed to be the forgotten fundamental of the energy crisis, the elementary arithmetic of growth. The arithmetic is applied to what is known about the reserves of fossil fuels. A large number of erroneous pronouncements from public figures and news media are collected here.

Title: THE OIL SHORTAGE—A STORY GEOLOGISTS SHOULD TELL
Source: Journal of Geological Education
Vol. 28, No. 1; Pages 36-45
Jan 1980
Date: 1980

Description:
Presents a discussion on the United States' increasing dependency on foreign oil to meet its energy needs. The test and graphs are intended to assist speakers who need more accurate and concise information to present to groups in the public sector.

Title: THE THIRD WAVE
Source: William Morrow and Co., Inc.
105 Madison Avenue
New York, NY 10016
Date: 1980

Description:
Toffler contends that changes that are going on in today's society are interrelated and will lend to the end of industrialism and the rise of a new civilization. He also explores the relationship between changing energy patterns and new forms of family life.

Cost: $14.95 - Hardback
$3.95 - Paperback

Title: BETTER USE OF ELECTRIC LIGHTS, HOME APPLIANCES, SHOP TOOLS - ANYTHING THAT USES ELECTRICITY
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Hackleman

Description:
This interesting book shows how to cut back consumption of energy by modifying those electrical devices that gobble it up. Well illustrated.

Number of Pages: 144
Cost: $10.00

Title: THE HOMEBUILD, WIND-GENERATED ELECTRICITY HANDBOOK
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Hackleman

Description:
A companion volume to the book entitled WIND AND WINDSPINNERS, focuses primarily on finding, installing, rewiring and operation of grassroots wind generator systems using Jacobs and Windcharger generators. Extremely detailed instructions regarding repairing and rebuilding generators, installation, erecting towers, control circuits, auxillary power generation and very comprehensive.

Number of Pages: 194
Cost: $10.00

Title: METHANE: PLANNING A DIGESTER
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Meynell

Description;
A fairly detailed handbook that shows how to build a digester to treat sewage and produce methane for use in homes, businesses and on the farm. Illustrated with bibliography

Number of Pages: 150
Cost: $5.00

Title: WIND AND WINDSPINNERS
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 50501
Author: Hackleman and House

Description:
One of the best books available on the basics of wind-to-electrics energy conversion. Explains the how-to's of building an efficient, low-cost Savonius rotor windplant.

Number of Pages: 140
Cost: $10.00

Title: **ALCOHOL FUELS PROGRAM TECHNICAL REVIEW**
Source: Editor, Alcohol Fuels Process Newsletter
Dr. Larry Douglas
Solar Energy Research Institute
1617 Cole Boulevard
Golden, CO 80401
Date: 1981
Author: SERI

Description:
This technical review describes various methods of producing alcohol fuels and what is being done at various universities.

Number of Pages: 98
Cost: Free

Title: **THE SOLAR LOBBY'S CONSUMER GUIDE**
Source: Solar Lobby
1001 Connecticut Avenue, NW 5th FL
Washington, DC 20036
Author: Solar Lobby

Description:
An interesting and colorful pamphlet written in a question/answer format describing basic solar information. Booklet includes information on: how to shop for a solar system, tax credits, wind power, alcohol fuels, photovoltaics, water power. There is a section titled "Household Energy Savers" which names various household appliances and describes conservation measures for each. Also listed are resources for more information. Includes an order form to subscribe to the SUN TIMES, which keeps members informed about new developments in solar and energy issues.

Number of Pages: 13
Cost: Free

Title: **TECHNOLOGICAL CHANGE AND ITS LABOR IMPACT IN 5 ENERGY INDUSTRIES**
Source: Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(Stock # 029-001-02302-2
Date: 1979

Description:
This bulletin appraises major technological changes emerging in five American industries (coal mining, oil and gas extraction, petroleum refining, petroleum pipeline transportation, and electric and gas utilities) and discusses the impact of these changes on productivity and occupations over the next five to ten years. Its separate reports on each of these energy industries outline (1) recent technological advances, (2) the output and productivity outlook, (3) investment in the industry including capital expenditure and research and development programs, and (4) employment and occupational trends and the adjustment of workers to technological change. The first report discusses environmental and health concerns which have led to a decline in productivity and employment in the coal industry. The need for new oil and gas sources and for more professional and technical workers is covered in the next report on oil and gas extraction refining. Predictions for declines in employment and output in petroleum refining and petroleum pipeline transportation are made in the third and fourth reports. Increasing productivity and employment and changing occupational requirements for electric and gas utilities are outlined in the final report.

Cost: $2.40

Title: **ESTABLISHING PRIORITIES FOR POSTSECONDARY ENERGY-RELATED TECHNOLOGY PROGRAMS**
Source: Technical Education News
Vol. 36, No. 4, Pages 14-15
May-June 1977
Date: 1977
Author: Brooking, Walter J.

Description:
Data from a Shell Oil Company forecast of national energy requirements through 1980 and from an national invitational conference on energy-related postsecondary programs are presented under the following headings: coal mining beneficiation and processing, petroleum extraction and refining, nuclear power production, solar energy, and energy monitoring or control technicians.

Title: USING THE WEATHER BUREAU
Source: Total Environmental Action, Inc., Information Service
Church Hill
Harrisville, NH 03450
Date: 1978
Author: Mahone, Doug

Description:
This technical report discusses how to access information from the U.S. Weather Bureau which can be valuable to anyone involved with solar energy, wind power, building design, food growing, etc.

Number of Pages: 5
Cost: Contact Source

Title: ENERGY CONSERVATION IN THE RURAL HOME - LANDSCAPING TO CUT FUEL COSTS
Source: U.S. Department of Agriculture
Office of Governmental and Public Affairs
Washington, DC 20250
Date: 1981
Author: U.S. Department of Agriculture

Description:
Planting trees and shrubs around your home will help reduce heating and cooling costs. The choice and placement of plants will help reduce these costs. These topics are covered in the pamphlet: wind effects, windbreak benefits, impact of a 3-row windbreak of 25' trees, foundation planting, planting for shade, etc. Planting diagrams are given, along with good how-to illustrations.

Number of Pages: 4
Cost: Free - Single Copy

Listing of Bibliographies Available

General

Title: THE WOODBURNERS CATALOG
Source: EARS
Box 545
La Veta, CO 81055
Date: 1980

Description:
Gives descriptions, specifications and pictures of many wood stoves, plus names of manufacturers and addresses. Also includes chapters on Buying a Woodstove, Cleaning Your Woodburning System, Handmade Hot Water Systems, and Solar Wood Dryers. Well illustrated.

Number of Pages: 92
Cost: $8.95

Title: ALCOHOL FUELS
Source: National Center for Appropriate Technology
P.O. Box 3838
Butte, Montana 59701

Description:
This bibliography lists books, access listings, periodicals and a resource list related to the production and use of alcohol fuels. It also includes alcohol manufacturers and engineering firms and examples of small and medium-sized alcohol stills sources.

Number of Pages: 7
Cost: Contact Source

Title: **ENERGY: SELECTED RESOURCE MATERIALS FOR DEVELOPING ENERGY EDUCATION/CONSERVATION PROGRAMS**
Source: National Wildlife Federation
1412 16th St., NW
Washington, DC 20036
Date: 1975
Author: Wert, Jonathan M.

Number of Pages: 22
Cost: Single copy/free, additional 10¢ ea.

Title: **ENERGY: A BIBLIOGRAPHY**
Source: Northwest Curriculum Coordination Center
Washington State Coordination Council for Occupational and Technical Education
222 Airdustrial Park, Box 17
Olympia, Washington 98504
Date: 1980

Description:
The WCCC is a regional center of the National Network for Curriculum Coordination in Vocational-Technical Education and is funded by the U.S. Dept. of Education. A Curriculum Resource Center is maintained by WCCC to help its consortium members in the development and preparation of vocational-technical curriculum materials. The Center also acquires and disseminates newly developed curriculum materials and disseminates them to the states within the region through State Liaison Representatives. This particular document is a bibliography listing materials that would be of interest to vocational education teachers. Materials are loaned for use by teacher.

Number of Pages: 28
Cost: Free

Title: **ENERGY FILMS INTERIM CATALOG**
Source: U.S. Department of Energy
P.O. Box 62
Oak Ridge, TN 37830
or
East Central Network & IL Vocational Curriculum Center
Sangamon State University, E-22
Springfield, IL 72708
Date: 1978

Description:
This catalog contains an annotated bibliography of 92 films related to energy which are available for free loan from USDOE.

Number of Pages: 35
Cost: Contact U.S.D.O.E.
Loan from East Central Network & IL Voc. Curriculum Center

Wind / Solar

Title: WIND ENERGY PLANNING
Source: The Council of Planning Librarians
1313 E. 60th, Suite 158
Chicago, IL 60637
Date: Oct. 1979
Author: Otawa, Toru

Description:
This bib lists both technical and general articles and reports. Some topics include "Economics of Wind Energy," "Technology Developments" and "Prospects for Wind Energy Use." Also included is an appendix.

Number of Pages: 31
Cost: $3.50

Title: WIND ENERGY INFORMATION DIRECTORY
Source: U.S. Government Printing Office,
Superintendent of Documents
Washington D.C. 20402
Author: Solar Energy Research Institute

Description:
This is a comprehensive listing of available publications dealing with federal programs, manufacturers, dealers and distributors, siting, wind data, universities and colleges conducting wind research, organizations which offer wind information, wind periodicals and books, audiovisuals, and energy extension services.

Number of Pages: 28
Cost: $2.75

Title: SHINING EXAMPLES: MODEL PROJECTS USING RENEWABLE RESOURCES
Source: Center for Renewable Resources
1001 Connecticut Avenue, NW, Suite 510
Washington, D.C. 20036
Date: 1980
Author: Courrier, Kathleen, et al

Description:
This book contains a compilation of model projects using renewable resources. Model projects in the following areas are described: Agricultural, Community: City, Community, Low Income, Commercial and Industrial, Education and Outreach, Financing, Government: Legislation, State, Housing and Public Buildings, Utility.

Number of Pages: 210
Cost: $6.95

Title: SOLAR ENERGY EDUCATION BIBLIOGRAPHY
Source: Center for Renewable Resources
1028 Connecticut Avenue NW
Washington, D.C. 20036
Date: 1978
Wagner, **Beth**

Description:
This is a comprehensive, annotated bibliography of solar publications and audiovisual materials for pre-school through college levels.

Number of Pages: 38
Cost: Contact Source

Title: THE SOLAR AGE RESOURCE BOOK
Source: Everest House, Publishers
1133 Avenue of the Americas
New York, NY 10036
Date: 1979
Author: McPhillips, Martin, Editor

Description:
This guide presents numerous ways in which solar energy can be captured, stored, and used. It includes articles, buyer's guides and listings.

Number of Pages: 242
Cost: $9.95

Title: **ENERGY CONSERVATION IN CONSTRUCTION**
Source: The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road, Columbus, OH 43210
Date: 1978

Description:
This package includes the module "Understanding Solar Energy Systems." A mini list and bibliographies.

Cost: Contact Source

Title: **THE SOLAR BUYER'S GUIDE AND DIRECTORY OF THE SOLAR INDUSTRY**
Source: Solar Data
13 Evergreen Rd.
Hampton, NH 03842
Date: 1979

Description:
This book lists the names, addresses, telephone numbers, and people to contact of over 3,000 U.S. companies in the solar industry. Describes over 25 different solar products, names of companies working with photovoltaic or solar cells with solar thermal electric plants and total energy systems, names and activities of wind energy conversion companies and other helpful data.

Cost: $20.00

Title: **NATIONAL SOLAR ENERGY EDUCATION DIRECTORY, 2ND EDITION**
Source: Superintendent of Documents
North Capital & H
Washington, D.C. 20402
(Stock # 061-000-00368-1)
Date: Jan. 1980
Author: Corcoleotes, George and others

Description:
Presented are listings of solar-related courses, programs, and curricula at about 700 post-secondary institutions nationwide. Included under each institutional entry are separate listings of courses on programs. Each course on program description includes: (1) the instructor and his telephone number; (2) course number; (3) department responsible for the course, program or curriculum; (4) credits; (5) student level; (6) duration; (7) contact hours by class and laboratory time; (8) principal topics covered; (9) number of times taught; and (10) average enrollment.

Cost: $5.50

Environmental

Title: **A BIBLIOGRAPHY OF MATERIALS FOR ENVIRONMENTAL EDUCATION**
Source: Wisconsin Vocational Studies Center
University of Wisconsin-Madison
1026 West Johnson St.
Madison, Wisconsin 53706
(PH: 608-283-4357)
Date: 1978
Author: Lambert, Roger H., and others

Description:
This bibliography of materials for environmental educaiton was designed to encourage and support curriculum development and instructional activities in vocational education and career development throughout Wisconsin through collection and dissemination of materials on a free loan basis. The entries in this bibliography are divided into the following categories: environmental education (general), ecology (general), natural resources, energy, land use, pollution, solid wastes, population, and economic/social/cultural environment. For most citations addresses and prices are listed for availability from the original source. A list of audiovisual materials sources is included.

Cost: $2.00

Listing of Resource Guides

Source: American Institutes for Research in the Behavioral Sciences (AIR)
P.O. Box 1113
Palo Alto, CA 94302
Phone: 415/493-3550
Publication: **ENERGY CONSERVATION STRATEGIES FOR TOMORROW'S WORKERS**

Content:
This book lists energy conservation materials that are instructional in nature that are available for use with students. A very current book, it lists materials produced between 1975-1981. 90 pages.

Price: $7.50

Source: Ballinger Publishing Co.
Cambridge, Massachusetts
or
Business Publishers, Inc.
P.O. Box 1067
Silver Spring, MD 20910

Content:
This large and extensive document provides professionals in government industry and academia, with vital information on developing environmental legislation, regulations and business opportunities related to the environment.

Price: $9.95

Source: Boyd & Fraser Publishing Co.
3627 Sacramento St.
San Francisco, CA 94118

Content:
Based on the Course by Newspaper program, this publication describes how to use the Courses by Newspaper Topics, gives many resources for information and an annotated film list.

Price: $9.95

Source: Center for Renewable Resources
1001 Connecticut Avenue, NW
Washington, D.C. 20036
Publication: **SHINING EXAMPLES: MODEL PROJECTS USING RENEWABLE RESOURCES**

Content:
This catalog describes model local projects in the area of renewable resources and gives the appropriate information to contact the participating organiztion for information regarding the project.

Price: Write for price

THE DEPARTMENT OF ENERGY INFORMATION NUMBER

Office of Consumer Affairs has two toll-free numbers for people interested in alcohol fuels. They are: 1-800-535-2840 and 1-800-533-5333.

The Department of Energy contact in Washington, DC, is Harry Loper - (202-252-5141).

Source: Energy Conservation Section
Bonneville Power Administration
P.O. Box 3261
Portland, OR 97208
Contact: Don Davey
or
Oregon Dept. of Education: Ray Thiess
Publication: **RESOURCE GUIDE FOR ENERGY CONSERVATION EDUCATION 1980**

Content:
A resource guide listing some resources and sources of information on energy conservation education that are available in the Pacific Northwest. 53 different agencies are listed, along with the materials available, contact people, etc.

Source: Council of Planning Librarians
1313 East 60th Street, Rm 459
Chicago, IL 60637
Publication: A resource guide listing some resources and sources of information on energy conservation education that are available in the Pacific Northwest. 53 different agencies are listed, along with the materials available, contact people, etc.

Source: Council of Planning Librarians
1313 East 60th Street, Rm 459
Chicago, IL 60637
Publication: **CPL BIBLIOGRAPHIES - CATALOG OF PUBLICATIONS IN PRINT**

Content:
A catalog of bibliographies available through the Council of Planning Librarians. Various subjects are listed. Price information is included.

Publication: **AN ANNOTATED INDEX TO CPL BIBLIOGRAPHIES 1-69**

Content:
These bibliographies relative to energy and energy conservation are available.

Note: The ANNOTATED INDEX. . .does not include a price list. You will need both publications.

Price: Free

Source: East Central Network & IL Vocational Curriculum Center
Sangamon State University, E-22
Springfield, IL 62708
Contact: Randi Anderson
Phone: 800/252/8533
Publication: **EAST CENTRAL RESOURCE GUIDE TO ENERGY AND ENERGY RELATED PROGRAMS IN VOCATIONAL EDUCATION ECCMC SPECIAL BIBLIOGRAPHY IN VOCATIONAL & CAREER EDUCATION - ENERGY**

Content:
(1) This resource guide outlines various secondary and post-secondary energy programs in vocational education in the East Central region of the National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE).
(2) This bibliography is an update of #1 - EAST CENTRAL RESOURCE GUIDE. . .Materials from this center are available to educators on a loan basis.

Price: Free while supplies last

Source: Dr. Roger Messenger
Department of Electrical Engineering
Florida Atlantic University
Boca Raton, Florida 33432
Publications: **ABSTRACTS OF ENERGY EDUCATION MATERIALS FOR K-12**
ABSTRACTS OF ENERGY EDUCATION MATERIALS FOR COLLEGE CLASSES ENERGY EDUCATION AT THE UNIVERSITY LEVEL

Content:
These publications list materials in energy education in the related areas.

Price: $2.00 each

Source: National Center for Appropriate Technology
P.O. Box 3838
Butte, Montana 59701
Phone: (406) 723-6533
Publication: **BUILDING & ENERGY BIBLIOGRAPHY - B005**

Content:
This publication lists books and periodicals which deal with appropriate technology and practical applications for the building industry.
Other bibliographies available from NCAT are:
B001 - SOLAR
B002 - Wind
B003 - Organizing Community Gardens
B004 - Economic Development
B005 - Building and Energy
B006 - ALTERNATIVE WASTE SYSTEMS
B007 - Methane from Anaerobic Fermentation of Manure
B008 - Biological Management of Passive Solar Greenhouses
B009 - Alcohol Fuels from Renewable Resource

Price: Single copies: free
Multiple copies: 25¢ ea

Source: National Technical Information Services (NTIS)
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Publication: **VOLUME 2 - ENERGY EDUCATION MATERIALS INVENTORY (AN ANNOTATED BIBLIOGRAPHY OF CURRENTLY AVAILABLE MATERIALS, K-12)**

Content:
An annotated bibliography of widely available energy education materials and reference sources. Included are: audiovisual listings, activity packages, printed material, energy information sources, grade level index, alternative energy sources, energy conservation, consumption, and utilization, energy policy and legislation, environmental/social aspects of energy technology, fossil fuels.

Price: Printed copy: $14.50
Microfiche: $3.00

Source: National Technical Information Service
U.S. Department of Commerce
Springfield, Virginia 22161
Publication: **PRACTICAL MATERIALS FOR TEACHING - RESOURCE FILE: EDITION I - ENERGY MANAGEMENT**

Content:
This directory lists energy education programs directed toward increasing the energy conservation awareness of scientists, engineers, managers and technicians working in energy management areas. The resource is prepared to help with the process of identifying, selecting, and obtaining materials for promoting energy-conservation skills. Section II includes comprehensive descriptions of such items as operations and maintenance manuals, life-cycle costing handbooks, films on fuel-saving driving techniques, and courses devoted to weatherization. Section III describes supplementary resources.

Price: $9.25

Source: The Seabury Press
815 Second Avenue
New York, NY 10017

Content:
This publication consists of a collection of various articles that appeared in other publications all focused on energy and alternative energy resources as well as conservation.

Price: Write for price

Source: The Seabury Press
815 Second Avenue
New York, NY 10017

Content:
This publication consists of a collection of various articles that appeared in other publications all focused on energy and alternative energy resources as well as conservation.

Price: Write for price

Source: Small Farm Energy Project
Center for Rural Affairs
P.O. Box 736
Hartington, NE 68739

Publications: ANNOTATED BIBLIOGRAPHIES

1. Alternative Energy - General
1B. Alternative Energy Periodicals
2. Bio-Fuels, Alcohol
3. Composting - General
4. Composting - Toilets
5. Energy Conservation
6. Energy in Agriculture
7. Farmers Market
8. Films, Energy
9. Food Co-ops
10. Gardens, Community
11. Greenhouses, Solar
12. Heavy Metals, Sludge
13. Land Applications
14. Methane Energy
15. Organic Farming
16. Small Scale Agriculture
17. Solar Energy-Agriculture
18. Solar Energy General
18B. Solar Water Heating
19. Solar Food Drying
20. Solid Waste Handling
21. Technology, Appropriate
22. Tillage, Minimum
22C. Underground Homes
23. Wind Energy
24. Wood Energy

Note: Write for a free copy of the Small Farm Energy Project's Publication List. They also produce a newsletter, published bi-monthly for $5.00/year. These bibliographies are all dated May 1978.

Price: $.25 each

Source: Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402
Stock # 061-000-00534-7

Publication: NATIONAL SOLAR ENERGY EDUCATION DIRECTORY

Content:
This directory lists 2,308 solar-related courses and 367 programs and curricula offered at over 892 post-secondary institutions in the U.S.

Price: $7.00

Source: Technical Information Center
U.S. Department of Energy
P.O. Box 62
Oak Ridge, TN 37830
or
ECCMC (See Directory for address)

Publication: ENERGY INFORMATION - WHAT'S AVAILABLE AND HOW TO OBTAIN IT

Content:
This directory provides information on hotlines, newsletters, regulations, technical information, regional and state offices for energy conservation information and other sources.

Price: Loan from ECCMC (East Central Network & IL Vocational Curriculum Center)

Source: United States Government Printing Office
Superintendent of Documents
Washington, DC 20402

Publications: SUBJECT BIBLIOGRAPHIES

1. **ENERGY POLICY, ISSUES AND PROGRAMS - SB-305**
2. **SOLAR ENERGY - SB-009**
3. **ENERGY MANAGEMENT FOR CONSUMERS AND BUSINESSES - SB-303**
4. **NATIONAL BUREAU OF STANDARDS HANDBOOKS AND MONOGRAPHY (Energy conservation and management guides are listed among other topics). SB-133**
5. **FARMS AND FARMING - SB-161**
6. **ELECTRICITY AND ELECTRONICS - SB-053**

Content:
These subject bibliographies are excellent tools for determining what materials are available from the U.S. Government Printing Office. Many interesting materials relating to energy conservation in the subject areas are listed. Listings give a brief description of the material, the price, and include an order form. Write to this office for a complete listing of their subject bibliographies.

Source: Vocational Curriculum Management Center
Bldg 17 Airdustrial Park
Olympia, WA 98504
Publication: THE VOCATIONAL CURRICULUM CATALOGUE

Content:
This catalog contains listings of vocational materials that have been developed locally or by state departments of education within a 10 state region served by the Vocational Curriculum Management Center (NWVCMC). Included is a section devoted to energy conservation in the vocational areas.

Source: Wisconsin Vocational Studies Center
University of Wisconsin-Madison
964 Educational Sciences Building
1025 W. Johnson St.
Madison, WI 53706
Publication: VOCATIONAL EDUCATION RESOURCE MATERIALS - A BIBLIOGRAPHY OF MATERIALS FOR ENVIRONMENTAL EDUCATION, 1978

Content:
Lists materials that are not normally listed in ERIC or government publications. Includes books, pamphlets, curriculum and general information sources, and sources of audio-visual aids. Write for an updated listing, if available.

Price: Possibly free - write for price

Listing of Energy Education Catalogs

Title: MOVIES ABOUT ENERGY - 1981
Source: American Petroleum Institute
Public Relations Department
Photographic and Film Services
2101 L. Street, NW
Washington, DC 20037

Content:
This catalog consists of a listing of films on energy-related subjects. Many of the films are available on free loan, some may be rented or purchased.

Title: AMOCO TEACHING AIDS - EDUCATIONAL INFORMATION AND CLASSROOM MATERIALS
Source: Amoco Educational Services
Public Affairs - MC 3705
P.O. Box 5910-A
Chicago, IL 60680

Content:
List films, teaching aids and free teaching materials available to teachers in the area of energy and energy conservation.

Title: 1980 ENERGY/ENVIRONMENT CATALOG
Source: Ballinger Publishing
17 Dunster Street
Harvard Square
Cambridge, MA 02138

Content:
A 24-page catalog containing books available for purchase in the areas of energy and the environment. Thorough descriptions of each book are given. An excellent catalog for choosing up-to-date literature on the subject of energy/environment.

Title: EDUCATIONAL MATERIALS CATALOG
Source: Center for Occupational Research and Development
601 Lake Air Drive, Suite C
Waco, TX 76710

Content:
Lists and describes instructional materials and program planning guides which are developed to prepare and retrain men and women for careers in new and rapidly growing areas of business and industry. A section on Energy Conservation and use Technology is included.

Title: UNITED STATES DEPARTMENT OF ENERGY - CITIZENS' AWARENESS PUBLICATIONS
Source: DOE Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830
Attention: Citizens' Assistance Section

Content:
Publications listed in this pamphlet represent a selection of energy booklets, pamphlets, posters, and fact sheets prepared by the Dept. of Energy to assist its offices in responding to citizen's requests for energy information. Single copies are available free upon request.

Title: THE SECOND PASSIVE SOLAR CATALOG
Source: EARS
Box 545
La Veta, CO 81055

Content:
Includes all new listings of passive solar consultants, with experience, specialty costs, and phone for the U.S. and Canada. Product listings include: description, price and availability for the U.S. and Canada. Covered in the text are retrofitting your home, construction details, examples, low energy use building materials and techniques, etc. 1980, 96 p. by David Bainbridge.

Cost: $12.50

Title: **SOLAR AGE CATALOG**
Source; EARS
Box 545
La Veta, CO 81055

Content:
An up-to-date catalog of solar energy knowledge and materials. A sourcebook of over 250 product descriptions with feature-by-feature comparisons; state-by-state listings of solar professionals; and basic articles by experts. 1977 - Solar Age Magazine.

Cost: $8.50

Title: **EARTHMIND PUBLICATIONS LIST**
Source: Earthmind
4844 Hirsch Rd.
Mariposa, CA 95338

Content:
A listing of publications available for purchase through them dealing with subjects of natural energy sources, organic gardening, and other aspects of a more self-reliant living.

Title: **PUBLICATIONS**
Source: Ecotope
2328 E. Madison
Seattle, WA 98112

Content:
A 1-page sheet listing the publications that are available through Ecotope. These publications are mostly technical papers detailing research procedures and findings in the area of solar energy. Also listed is a Solar Energy Training curriculum which includes a student text, charts and overheads for solar training and a teacher's guide.

Title: **FRIENDS OF THE EARTH IN PRINT: SPRING 1982**
Source: Friends of the Earth
1045 Sansome Street
San Francisco, CA 94111

Content:
Lists and describes various books and reports that are available through them. Also describes SOFT ENERGY NOTES, a publication (bimonthly journal) featuring the latest news and studies on soft energy. Back issues are available.

Title: **AAVIM'S 1982-83 CATALOG**
Source: Instructional Materials Laboratory
10 Industrial Education Building
University of Missouri-Columbia
Columbia, MO 65211

Content:
This catalog presents the latest materials available to vocational educators. There are a few energy conservation oriented materials offered with more coming in next year's.

Source: Lennox Education Products
P.O. Box 400450
Dallas, TX 75240
Phone: (214) 783-5463

Note:
Ask for a catalog of their educational products and services and/or the general literature package.

Title: **PUBLICATIONS BROCHURE**
Source: Maine Audubon Society
Energy Department
118 U.S. Route One
Falmouth, ME 04105

Content:
Lists publications and prices for materials that are available from the Maine Audubon Society.

Title: **MEGATECH ENERGY AND POWER PROJECTS AND EXPERIMENTS**
Source: Megatech Corporation
29 Cook Street
Billrica, Massachusetts 01866
Phone: (617) 273-1900

Content:
The projects in this catalog offer a consistent approach to studying various sources of energy and the generation of power by their related conversion devices. These projects are designed to be integrated into existing course of study.

Title: **META PUBLICATIONS**
Source: META Publications
Modern Energy & Technology Alternatives
P.O. Box 128
Marblemount, WA 98267
Phone: (206) 853-6851

Content:
Lists appropriate technology and related topics - books, pamphlets, and plans. Materials for these main areas are listed: Appropriate technology, shelter, energy, industry, and infrastructure. A retail mail order book seller, specializing in construction, alternative energy, especially solar secondarily - metal working, water supply & handling and related topics. Will special order other books upon request.

Title: **1980-1981 CURRICULUM MATERIALS**
Source: New Jersey Vocational-Technical Curriculum Laboratory
Rutgers - The State University
4103 - Kilmer Campus
New Brunswick, NJ 08903
Phone: (201) 932-3845

Content:
Most of the curriculum materials listed in this catalog were written by the faculty members of the vocational-technical schools of New Jersey. The materials have been field-tested for a minimum of one school year prior to publication.

Title: **NCAT NEW PUBLICATION PRICE LIST - 1981**
Source: National Center for Appropriate Technology
P.O. Box 3838
Butte, Montana 59701
Phone: (406) 494-4572

Content:
A catalog of brochures which will help low-income people find ways to save energy costs.

Title: **NU-TREND CATALOG**
Source: Nu-Trend Laboratories
3320 7th Avenue
Council Bluffs, IA 51501
Phone: (712) 322-6109

Content:
Listed are materials available for sale by Nu-Trend Laboratories, including topics on Power Alcohol, Wood, Coal, Propane, etc., Wind, Water, Methane & Solar, and miscellaneous. They also offer DMSO for sale.

Title: **OCCUPATIONAL CURRICULUM LABORATORY PUBLICATIONS 1981-82**
Source: Occupational Curriculum Laboratory
East Texas State University
Commerce, TX 75428
Phone: (214) 886-5623

Content:
This catalog lists materials developed through the Mid-America Vocational Curriculum Consortium (MAVCC), and many from other curriculum centers throughout the U.S. Included is a new program entitled ENERGY CONSERVATION CURRICULUM FOR VOCATIONAL STUDENTS.

Title: **PENNSYLVANIA INSTRUCTIONAL MATERIALS - AGRICULTURAL EDUCATION 1981**
Source: The Pennsylvania State University
Department of Agricultural Education
13 Armsby Building
University Park, PA 16802
Phone: (814) 863-0443
Contact Person: Ms. Martha Ross

Content:
Instructional materials covering all areas of Agricultural Education.

Title: **1982 CATALOG OF LEARNING AIDS**
Source: Sears, Roebuck and Co. D/703
Consumer Information Services
Sears Tower
Chicago, IL 60684

Content:
Lists materials available for purchase mainly aimed at Consumer Education and Home Economics.

Title: **SEIBB PUBLICATIONS BULLETIN: TECHNICAL INFORMATION**
Source: SERI Document Distribution Service
1617 Cole Boulevard
Golden, CO 80401

Content:
Lists publications available to members of the solar community with a professional need for solar energy information, including brochures, technical reports, papers, and presentations delivered by SERI staff at solar-related conferences and symposia.

Title: **CONSERVATION AND SOLAR ENERGY CURRICULUM PLANNING GUIDE & CATALOG**
Source: The Solar-Ed Corporation
1627 Litchfield Turnpike, P.O.
Drawer X
Woodbridge, CT 06525

Content:
A catalog listing solar-related items and kits for use in the classroom. Also included is a kit entitled Passive Architecture Curriculum Package which is a collection of teaching kits and color slides for a classroom unit on solar energy and passive architecture. (Free).

Title: **PUBLICATIONS LIST**
Source: Tab Books, Inc.
Blue Ridge Summit, PA 17214

Contents:
Lists publications on energy-related topics. Calls itself "the leading source for bestselling books on energy, alcohol fuels, and solar power."

Title: **RENEWABLE ENERGY RESOURCES**
Source: TotalEnvironmental Action, Inc.
22 Church Hill
Harrisville, NH 03450

Content:
A 1-page listing of books, calculator programs, plans, and audio visuals related to the use of solar energy, mainly in the construction and design area.

Title: **VOCATIONAL MATERIALS - 1981**
Source: University of Wisconsin-Madison
Publications Unit
265 Educational Sciences Building
1025 West Johnson Street
Madison, WI 53706
Phone: (608) 263-4357

Content:
Lists materials for sale related to vocational areas. There are a few materials in the area of Energy and Environmental instruction.

Listing of Energy Periodicals

Title: ALTERNATIVE SOURCES OF ENERGY
Source: Alternative Sources of Energy, Inc.
Route 2
Milaca, MN 56353
Date: Published Bi-monthly

Description:
This bimonthly magazine emphasizes the development of alternative technologies for energy production, agriculture, architecture, communication and transportation in a decentralized society.

Cost: $6.00/year

Title: ENERGY EDUCATOR NEWSLETTER
Source: Energy Education Association
13 Evergreen Rd.
Hampton, NH 03842
Date: Bi-monthly

Description:
A bi-monthly newsletter for teachers and other educators listing free or low-cost alternative energy education materials. Each issue reviews new books on solar energy, wind, water power or energy conservation, new films and slides, new energy curriculum material and new energy booklets and aids.

Number of Pages: 4-6
Cost: $22/year

Title: THE MOTHER EARTH NEWS
Source: The Mother Earth News
P.O. Box 70
Hendersonville, NC 28739
Date: Bimonthly magazine

Description:
This magazine deals mainly with alternate technologies and do-it-yourself projects. There are frequent articles and plans for alcohol skills; automobile modifications; wood-gas; passive solar, earth-sheltered, and cordwood construction of both houses and farm buildings; methane digesters; other alternate fuels and construction techniques.

Number of Pages: 188-204
Cost: $18.00/year

Title: PEOPLE AND ENERGY
Source: Institute for Ecoholigcal Policies
1413 K. Street, N.W.
8th Floor
Washington, DC 20005
Date: Monthly publication

Cost: $15.00/yr

Title: SMALL FARM ENERGY PROJECT NEWSLETTER
Source: Center for Rural Affairs
P.O. Box 736
Hartington, NE 68739
Date: Bimonthly publication

Cost: Free

Title: SOLAR LIFE
Source: SEINAM (Solar Energy Institute)
1110 Sixth Street, N.W.
Washington, DC 20001
Date: Monthly publication

Cost: $5.00/yr

VOED Energy Education Administration Resource Materials

Title: ENERGY-RELATED ACTIVITIES IN COMMUNITY, JUNIOR, AND TECHNICAL COLLEGES: A DIRECTORY
Source: American Association of Community and Junior Colleges
One Dupont Circle, NW
Suite 410
Washington, DC 20036
Phone: (202) 293-7050
Author: Mahoney, Jim

Description:
This Directory is designed as a resource for 2-year colleges to help them initiate, improve, expand, and assess their energy offerings. It identifies experts in the colleges who might provide technical assistance. One of these has been sent to every 2-year college in the country. The directory is available only under unusual circumstances. The OVEEP Resource Center has a copy.

Cost: Free

Title: A PROMISING MARRIAGE
Source: Community and Junior College Journal
Vol. 48, 3; Pages 10-4
November 1977
Date: 1977
Author: Carsey, J.N.

Description:
This article reviews recent developments and suggests methods that community colleges can utilize to meet the needs of the energy research and development administration by designing training programs for technicians in the environmental area, as well as developing programs designed to foster citizen awareness.

Title: SPENDING FOR SAVINGS: ENERGY AWARENESS AT LINCOLN LAND
Source: Community College Frontiers
Vol. 9, No. 1, Pages 4-10
Winter 1980
Date: 1980
Author: Croteau, Suzanne

Description:
This article describes the development and implementation of a community college's energy awareness program, which focuses on: (1) resource management to reduce the consumption of fossil fuels on campus; (2) programs encouraging energy conservation and the production of alcohol fuels; (3) leadership in the field; and (4) planning energy-related curricula.

Title: **INFORMING THE FUTURE: A PLAN FOR HIGHER EDUCATION FOR THE 80'S**
Source: Coordinating Board, Texas College and University System
P.O. Box 12788
Capital Station
Austin, TX 78711
Date: 1981

Description:
Major issues affecting higher education in Texas in the 1980s are identified in 20 working papers from outside consultants, the academic community, and Texas college and university system coordinating board staff. Topics and authors include: Higher Education in Texas in the 1980s (Christopher Dede); Leadership in Higher Education (Joseph Kauffman); Education for the Future (John D. Moseley); Media and Technology (John E. Fryman); Faculty Tenure (William R. Keast); The Importance of Research (H. Eldon Sutton); Collective Bargaining (Milden J. Fox, Jr.); State Support of Higher Education (John Harris); Independent Higher Education in Texas (Charles H. Oestreich); Potential Impacts of Water Resources on High Education in Texas (Robert M. Sweazy, Lloyd V. Urban, and George A. Whetstone); Significant Issues Confronting Texas Higher Education (William R. Johnson); Issues Influencing the Future of Urban Institutions of Higher Education (Charles E. Bishop); Health Professional Education (Edward N. Brandt, Jr.); Community College Funding (Jean Richardson); Public Community College Program Development and Evolvement in the 1980s (Robert L. Clinton); Investment in Higher Education; Balance Between General and Vocational Education (Doris Burbank); Public Higher Education Finance; Statewide Planning for Campus Construction; and Energy Resources.

Cost: No charge

Title: **ENVIRONMENTAL QUALITY AND ENERGY CONSERVATION CURRICULUM MODEL - FINAL REPORT**
Source: Energy and Education Action Center, U.S. Office of Education
Reporters Building, Rm 514
300 7th St., NW
Washington, DC 20202
Date: 1979
Author: Havemen, Jacqueline E. and O'Connell, Kathryn

Description:
To provide postsecondary vocational educators with a comprehensive understanding of environmental quality and energy conservation and their relevance to all occupational fields, a project designed generic curriculum model for postsecondary adult and vocational education and developed documents describing the model. In developing the model, a conceptual framework was used that focused not only on energy resources and technologies, but also on understanding relationships between energy conservation and environmental quality and human need satisfaction. Seventeen content areas were specified and organized into four documents—orientation guide, curriculum content model, resource book, and application guide.

Cost: Contact Source

Title: **ILLINOIS APPROPRIATE TECHNOLOGY PROJECT BOOK**
Source: Institute of National Resources, Alternative Energy Division
222 South College
Springfield, IL 62706
Date: 1978
Author: Kunka, Jill

Description:
This Project Book provides a basic tool for finding information, locating knowledgeable expertise, and identifying possible funding sources which could lead to applications of appropriate technology which may vary greatly in project type and comparative scale.

Cost: Contact Source

Title: **HOW TO IMPLEMENT ENERGY EDUCATION**
Source: NASSP Bulletin
Vol. 62, No. 419; Pages 18-20
September 1978
Date: 1978
Author: Bamberger, Richard

Description:
An energy education program is described in addition to recommendations which include federal aid for training teachers at energy education centers.

Title: **SCHOOL PROGRAM TAKES LEAD IN ENERGY CONSERVATION**
Source: NASSP Bulletin
Vol. 62, No. 419, Pages 37-40
September 1978
Date: 1978
Author: O'Day, Thomas, and Williams, Robert W.

Description:
This article describes an energy education program in a New York High School which involves the students, the staff and the school community.

Title: **ENERGY RESOURCE GUIDE**
Source: National Council for Resource Development
Suite 410 One Dupont Circle, NW
Washington, DC 20036
Author: NCRD members and staff

Description:
The purpose of this guide is to provide educators, especially community college educators, with a resource for identifying potential sources of funds for energy related programs and activities. It is a compilation of resources in the public and private funding sectors that are capable of providing support for educaitonal energy activities.

Number of Pages: 176
Cost: Free

Title: **ENERGY MANAGEMENT: A PROGRAM OF ENERGY CONSERVATION FOR THE COMMUNITY COLLEGE FACILITY**
Source: National Technical Information Service (NTIS)
U.S. Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22161
Date: 1978
Author: Miller, Harry, Comp; Rowe, Peter, Comp.

Description:
This publication is a guide to the total educational energy management (TEEM) approach for energy conservation at community colleges which includes step-by-step procedures for establishing a program task force, defining specific tasks, and assigning responsibilities. Action plans are developed, energy consumption monitored, goals set, and conservation measures implemented. More detailed information, charts, and worksheets related to all aspects of energy use are provided. Also included in the appendices are a section on performing an energy audit of campus facilities as well as a glossary.

Cost: Contact Source

Title: **ENERGY AND OCCUPATIONAL EDUCATION**
Source: Wisconsin Vocational Educator
Vol. 2, No. 3, Pages 7-9
March 1978
Date: 1978

Author: Ansell, Sherman D.

Description:
This article discusses the potential changes that changes in energy sources and uses would have on vocational training in Wisconsin, and how the new energy technologies would require curriculum changes and/or development.